

**REPORT PREPARED FOR:
Fulton Hogan Land Development Ltd**

**DETAILED SITE INVESTIGATION
MILLDALE STAGES 14-17
WAINUI**

**Prepared by:
Groundwater and Environmental Services
PO Box 190
Cambridge
7 August 2026**

EXECUTIVE SUMMARY

This investigation was carried out on behalf of FHLD to determine whether any potentially hazardous activities had occurred on, or around, Milldale Stages 14-17 that could have resulted in contamination of the ground within the site, and to evaluate the degree of any resulting contamination. It is proposed that properties within the site, located to the south of Orewa Awa, will be redeveloped for residential use.

A 2023 PSI identified potential contamination issues at several properties within the site, including:

- Horticultural land use.
- Use/disposal of asbestos-containing materials in and around buildings.
- Fill or rubbish areas.
- Use of lead-based paints on buildings.

A previous assessment of 522 Wainui Road identified the presence of asbestos-containing materials at several locations around buildings in the southeast of the property. Potential for contamination with heavy metals or PAHs was also identified.

Previous assessments of 480 Wainui Road, 9 Cemetery Road, Lot 4 DP 353309, and part of 36 Sidwell Road did not find any potential contamination.

A review of historic aerial photographs identified areas requiring investigation, and these were covered by walkover inspection, which identified actual or potential contamination issues on several of the properties. There were no issues identified at the remaining properties, or in the surrounding area, that would be likely to have resulted in contamination of the ground within the site.

Actual or possible HAIL activities identified across the site included:

- Potential for livestock dip or spray race operations.
- Potential for persistent pesticide bulk storage or use.
- Potential for storage tanks or drums for fuel, chemicals or liquid-based (possible farm fuel storage).
- Asbestos products manufacture or disposal (ACM in tracks, a fence, and buildings).
- Landfill sites (farm rubbish burial).
- Potential intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment (rubbish/waste burning).

Intrusive investigation and sampling targeting areas of potential contamination was carried out in March 2026.

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Soil contamination at levels above or below relevant guidelines for health and/or environmental protection was detected in samples from parts of:

- Lot 12 DP 198205
- 500 Wainui Road
- 522 Wainui Road
- Lot 8 DP 198205
- 9 Cemetery Road

No soil contamination was detected at the other sampled properties. Sampling could not be undertaken around the dwelling and shed in the southeast of 500 Wainui Road. Sampling in this area is recommended prior to demolition or earthworks.

No asbestos contamination has been detected in soil samples however the presence of asbestos-containing material was confirmed at the following properties:

- Lot 12 DP 198205
- 522 Wainui Road
- Lot 8 DP 198205

The conceptual site model based on the sampling carried out to date indicates that potential contamination in specific areas of the site could have significant effects on human health or ecological receptors as the source, pathway and receptor linkages are complete or potentially complete. Source, pathway and receptor linkages are incomplete for other parts of the site where contamination is present at levels below applicable guidelines.

Given the presence of contamination on site, the NES will apply to any proposed redevelopment. Consent will also be required under the contaminated land provisions of the Auckland Regional Plan.

Remediation is recommended for contamination at levels above the NES residential or outdoor worker protection guideline levels, and/or the permitted activity criteria for environmental protection. Remediation of asbestos-containing materials is also recommended. Further sampling may be required around some areas of identified contamination to confirm the extent of contamination prior to remediation.

Contamination at levels below the guidelines will require management during future earthworks. Contaminated material left on site will require appropriate long-term management and will be recorded on affected property titles.

As with any assessment of this nature, there is always the possibility that additional items not visible during the investigation may be revealed during subsequent investigations or during redevelopment of the site. Any such items should be evaluated by a suitably qualified environmental consultant in accordance with the requirements of Auckland Council.

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LIMITATIONS

No liability is assumed for misrepresentation of data or for items not visible, accessible or present at the time of the site investigations conducted by Groundwater and Environmental Services that may affect the validity and/or accuracy of the interpretation of environmental data.

Interpretations and conclusions presented herein are based on data presented in this report, information from others and experience on similar projects. The available data does not preclude the presence of materials at other locations at the site, which presently or in the future may be considered hazardous. Services in respect of this investigation have been performed in accordance with professional standards for investigations of contamination assessment. No guarantees are either expressed or implied.

This document and the information contained herein have been prepared for the use of Fulton Hogan Land Development Ltd in relation to proposed Milldale Stages 14-17 project and should not be used or relied upon by any other person or entity for any other project, with the exception that the relevant territorial authority can rely on it for the purpose of processing those consent applications for which this report has been prepared. Any reliance on this report by any other parties shall be at such party's sole risk.

This document has been prepared by a suitably qualified and experienced practitioner as required by the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (2011).

Report Version: **Revision A**

Report prepared on: 7 August 2026

Report prepared by:



Andrew MacDonald, MSc (Hons), Principal

Statement of Qualifications and Experience

My full name is **Andrew James MacDonald**

I am principal at **Groundwater and Environmental Services (GES)**. I hold the qualifications of Bachelor of Science, and Master of Science (Honours) from Auckland University and have 35 years' professional experience in the field of ground and groundwater contamination assessment, management and remediation. My experience includes:

- Preliminary and detailed environmental site investigations at a wide range of potentially contaminated sites.
- Remedial action and site management plans for contaminated sites.
- Organisation and supervision of remediation at contaminated sites.
- Validation of remediation at contaminated sites and preparation of site validation reports.
- Long-term contaminated site monitoring and management plans.
- Resource consents for site remediation and ongoing discharges of contaminants to ground at contaminated sites.
- Provision of expert evidence related to contamination issues.
- Peer review of contaminated site investigations.

I have worked extensively on earlier stages of the Milldale development as well as the nearby Millwater development. I have provided consulting services to private, commercial/industrial, local government, and central government clients.

I have been engaged by Fulton Hogan Land Development Limited (FHLD) (the Applicant) to undertake an assessment of land contamination issues associated with the Milldale Stages 14-17 project and to prepare this report in support of the substantive application under the Fast-track Approvals Act 2024 (FTAA).

While this is not an Environment Court proceeding, I confirm that I have prepared this assessment in accordance with the applicable professional and ethical obligations of my profession and that the opinions expressed are within my area of expertise.

1 Introduction

This report has been prepared in support of the substantive application for the Milldale Stages 14-17 Project under the Fast-track Approvals Act 2024 (FTAA).

The Project relates to approximately 231ha of land centred around Wainui Road in Wainui, Auckland. The proposal provides for a comprehensively planned urban development including residential neighbourhoods, a supporting commercial node, transport and servicing infrastructure, open space, wetland and ecological restoration, and associated enabling works.

The application seeks approvals necessary to facilitate the staged development of the Project, including a suite of resource consents required under the FTAA framework.

The substantive application is supported by a comprehensive set of technical assessments and plans addressing the environmental, servicing and infrastructure matters associated with the proposal. This report should be read alongside the Planning Report and the appended technical reports and drawings lodged in support of the substantive application.

1.1 Purpose and Scope of this Report

This report addresses matters relating to land contamination associated with the Project proposal. It seeks to assess the nature and extent of contamination resulting from historic or current land use activities on, and around, the site. Significant activities undertaken for this report included:

- Review of relevant previous environmental reports;
- Review of aerial photographs of the investigation area and surrounding land;
- Walkover inspection of the site to check for indicators of potential contamination;
- Preparation of a soil sampling and analysis plan targeting areas of potential contamination;
- Collection and analysis of soil samples to check for potential contamination; and
- Preparation of this DSI report in accordance with the requirements of the MFE guidelines for reporting on contaminated sites, the NES and the relevant sections of the AUP.

This report has been prepared having regard to the relevant statutory and technical framework applicable to the proposal, including the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES), and the contaminated land provisions of the Auckland Unitary Plan (AUP).

1.2 Site Description

The site comprises approximately 231ha of land located to the north of the existing Milldale development. The site comprises two distinct areas:

- Residential subdivision area to the south of the Ōrewa river (shown in red in Figure 1);
and

- Te Korowai o Maraeariki to the north of the Ōrewa river (shown in orange in Figure 1).

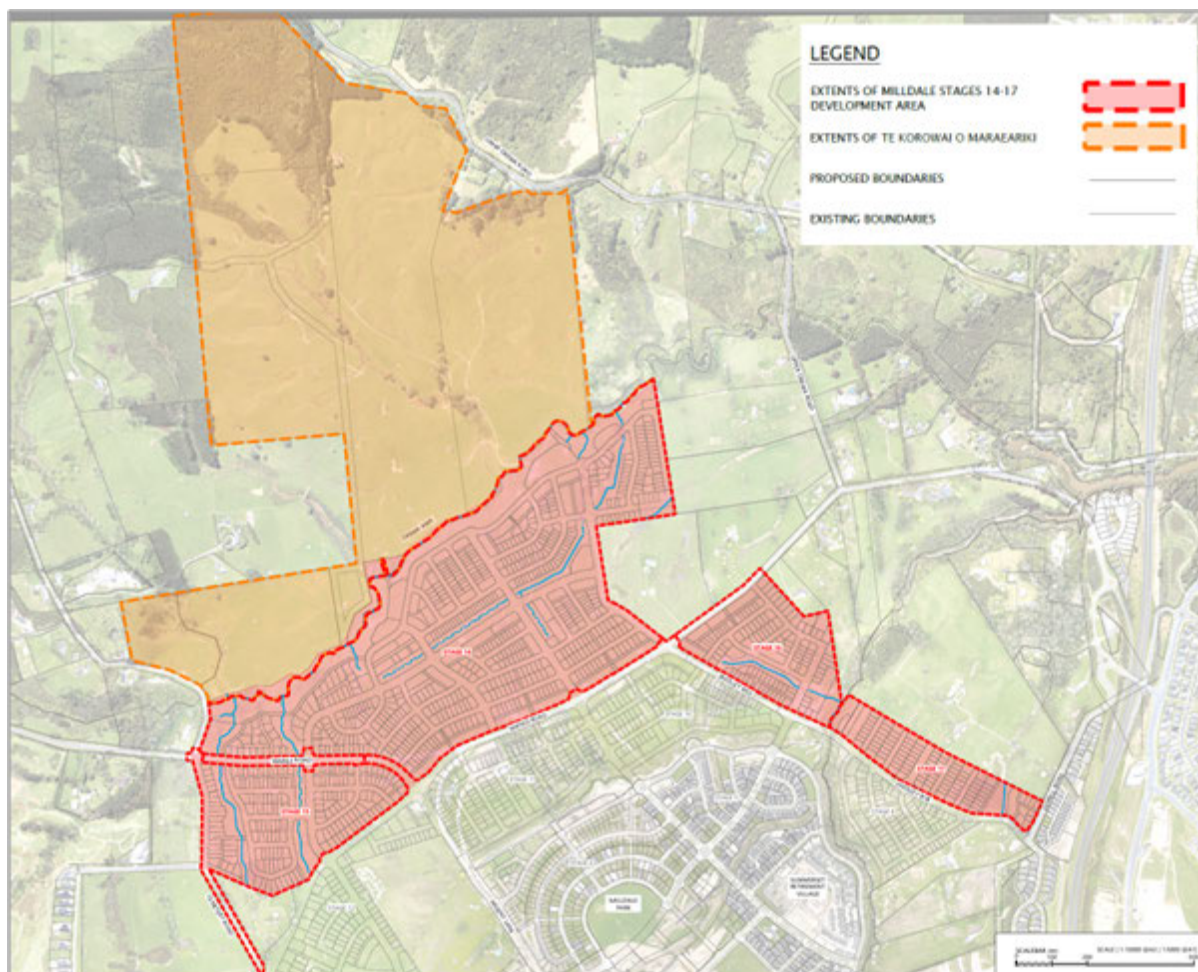


Figure 1: Site Location Plan

The proposed residential subdivision area is located within the Future Urban Zone under the Auckland Unitary Plan (AUP). This part of the site is characterised by gently undulating to rolling pasture, with several streams, natural wetlands, constructed ponds and artificial drains traversing the area.

Te Korowai o Maraeariki is located to the north of the Ōrewa river and is zoned Rural Production under the AUP. This area is characterised by more undulating to steep terrain, with a series of ridgelines separated by incised gullies extending from the Ōrewa River. The land is predominantly managed pasture interspersed with streams and natural wetlands, together with pine plantations, exotic vegetation and gorse scrub. Relatively large areas of indigenous vegetation are also present, including a Significant Ecological Area – Terrestrial Overlay in the north-western portion of the site.

There is existing water, stormwater and wastewater infrastructure surrounding the site as a result of the extensive development within previous Milldale Stages. However, the site itself is not currently serviced in terms of supply and infrastructure. The surrounding roading network has been progressively developed in accordance with the staging of the Milldale development.

Further detail regarding the site, surrounding environment and planning framework is provided within the Planning Report and technical reports appended to the application.

Property information for the site is summarised in .

Table 1 Property Information – Milldale Stages 14-17

Property Reference Number	Address	Legal description	Current Zoning	Site Area Hectares
7	602 Wainui Road	Lot 5 DP 198205	Future Urban	9.855
8	9 Cemetery Road	Lot 3 DP130515	Future Urban	6.535
9	597 Wainui Road	Lot 2 DP130515	Future Urban	7.025
10	569 Wainui Road	Lot 1 DP130515	Future Urban	2.28
11	Lot 8 DP 198205, Wainui Road	Lot 8 DP 198205	Future Urban	12.392
12	522 Wainui Road	Lot 9 DP 198205	Future Urban	11.285
13	500 Wainui Road	Lot 10 DP 198205	Future Urban	12.265
14	480 Wainui Road	Lot 11 DP 198205	Future Urban	5.8935
15	Lot 12 DP 198205, Wainui Road	Lot 12 DP 198205	Future Urban	10.105
16	Lot 4 DP 353309, Wainui Road	Lot 4 DP 353309	Future Urban	10.45
17	Sidwell Road Upper Orewa (Formerly part of 36 Sidwell Road)	LOT 1 DP 589819	Future Urban	7.4370

1.3

1.3 Description of the Proposal

The Milldale Stages 14-17 project seeks approvals for an urban development on the site. The proposal provides for up to 1,425 dwellings across a range of housing typologies and densities. In addition, the proposal includes provision for a small commercial area, transport infrastructure, servicing and stormwater infrastructure, subdivision, earthworks, stream works, and neighbourhood parks.

To the north of the Ōrewa river within Te Korowai o Maraeariki, the project includes private water and wastewater infrastructure if required, ecological restoration, as well as walking and cycling trails to enhance recreation and amenity.

Development of the Project will require a suite of approvals under the FTAA, including resource consents associated with subdivision, land use activities, bulk earthworks, infrastructure works, stream works, water take, diversion and discharge; along with NES for contamination and freshwater.

The aspects of the proposal relevant to this report include:

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1. Change of land use. The NES requires assessment of the nature and extent of contamination on site that could present a potential risk to future site users.
2. Bulk earthworks, infrastructure works and stream works. The NES and AUP require assessment of nature and extent of contamination on site that could present a potential risk to site workers or of discharges to the environment.

A site management and remedial action plan will be developed to provide procedures to deal with known contamination as part of site works. The plan will include procedures for dealing with unexpected contamination that could be encountered during those works.

A long-term management plan will be developed following the completion of works to provide measures for dealing with any remaining contamination on site.

A full description of the proposal is provided in the Planning Report and technical reports and drawings appended to the substantive application and should be read in conjunction with this report.

1.4 Reason for Investigation

This investigation has been carried out on behalf of FHLD to determine whether any potentially hazardous activities had been carried out on, or around, the site that could have resulted in contamination of the ground within the site, and to evaluate the degree of any resulting contamination.

1.5 Background

The site is located within land that has historically been predominantly used for rural grazing as part of farms and lifestyle blocks. Much of the site has historically been either in pasture or covered in vegetation although commercial horticulture is known to have occurred in parts of the site.

Significant earthworks have already been carried out to the south of the site as part of the Milldale development.

There do not appear to be any significant potentially contaminating activities currently being carried out across the site.

1.6 Geology

The geology of the site is dominated by the Mangakahia Complex¹, described as closely fractured to sheared, light or dark coloured, siliceous and locally calcareous mudstone with micaceous sandstone, siltstone, green and brown shale, and some muddy limestone.

The Mangakahia Complex commonly occurs as a melange of mixed lithologies, with a sheared mudstone matrix.

¹ Edbrooke, S.W. (2001). Geology of the Auckland Area. Institute of Geological and Nuclear Sciences 1:250,000 Geological Map 3.

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Low-lying areas around watercourses at the site may include Tauranga Group Alluvium/Colluvium (described as Pleistocene-aged clays and silts along with swamp and colluvium deposits).

1.7 Hydrology & Hydrogeology

The most significant potentially sensitive receiving environments for any contamination within the site would be surface water and underlying groundwater.

Orewa Awa runs from southwest to northeast through the site, separating the six rural production zoned properties in the north from the future urban zoned properties to the south of the river. Surface water from the properties north of Wainui Road drains to Orewa Awa.

Waterloo Stream separates the two properties in the south of the site (reference numbers 16 and 17). The stream discharges to the east into Orewa Awa.

Orewa Awa discharges to Whangaparaoa Bay through a tidal estuary located immediately south of Orewa.

Groundwater beneath the site is similarly expected to eventually discharge to Orewa Awa.

In general, groundwater beneath the site is likely to be perched above Northland Allochthon rock.

2 Site History

The available site history has been gathered from several sources and is set out in the following sections.

2.1 *Previous Environmental Reports*

A preliminary site investigation (PSI) that included the site was carried out by Environmental Management Solutions (EMS)². Potential contamination issues were identified at several properties, mainly relating to:

- Previous horticultural land use and associated agri-chemical use, storage, and disposal.
- Use/disposal of asbestos-containing materials in and around buildings.
- Fill or rubbish areas.
- Use of lead-based paints on current or former buildings.

Several properties at the site were only viewed from the roads or other boundaries due to access issues during the PSI. It was noted that walkover inspections would be required for those properties to get a complete picture of potential contamination issues. A table summarising the result of the PSI for Stages 14-17(adapted from the EMS report) is provided below.

² Environmental Management Solutions (October 2023). Preliminary Site Investigation, Proposed Wainui East Future Urban Zone Structure Plan, Milldale Stages 14-17 Plan Change and Wainui Plan Change Areas. Report prepared for Fulton Hogan Land Development.

Table 2 PSI Key Results

Property Reference number	Address	Proposed Land Use	Identified Unverified HAIL Activities/ Potential contaminants of concern	Future actions
7	602 Wainui Road	Residential/High density residential	No HAIL identified	
8	9 Cemetery Road	Residential/High density residential	Unverified HAIL A10, I	DSI required
9	597 Wainui Road	Residential/High density residential	No HAIL identified	Lead and asbestos screening required prior to demolishing buildings on site. If detected, soil screening may be required.
10	569 Wainui Road	Residential/High density residential	No HAIL identified	Lead and asbestos screening required prior to demolishing buildings on site. If detected, soil screening may be required.
11	Lot 8 DP 198205, Wainui Road	Residential/High density residential	No HAIL identified	
12	522 Wainui Road	Residential/High density residential	Unverified HAIL A1, A8, I	DSI required
13	500 Wainui Road	Residential/High density residential	Unverified HAIL A8, A10, I	DSI required
14	480 Wainui Road	Residential/High density residential	Unverified HAIL A10	DSI required
15	Lot 12 DP 198205, Wainui Road	Residential/High density residential	Unverified HAIL A8, A10	DSI required
16	Lot 4 DP 353309, Wainui Road	Residential/High density residential	No HAIL identified	
17	36 Sidwell Road	Residential/High density residential	No HAIL identified	Lead and asbestos survey required if buildings are to be demolished.

Investigations were also carried out by GES for some individual properties within the site. These are discussed below.

2.1.1 522 Wainui Road

Initial inspection and sampling were carried out around in the southeast of the property (around the dwelling and sheds) in 2023. The initial inspection identified items of concern, including

- Likely asbestos-containing material (ACM) in the ground outside the north side of the open-bay shed.
- A small area of visible contamination in the southwest corner of the open-bay shed.

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- Likely ACM in the ground and in a small stockpile in the area further north from the shed.
- An approximate 6 m length of fibrolite fence under trees east of the open-bay shed and track.
- A stockpile north of the large farm shed and west of the stockyards where rubbish burning had been taking place.
- An old asbestos-cement ornamental pond under the deck on the north side of the dwelling.
- Minor fibrolite sheet pieces around the base of the large tree north of the house.

Subsequent sampling of potential ACM confirmed the presence of asbestos.

Recommendations for the area included:

- Marking off the area north of the open shed so that there was no vehicle traffic over it.
- Leaving the ornamental asbestos-cement pond and fibrolite fence undisturbed until asbestos removal was carried out prior to demolition of the dwelling and sheds. The ground beneath and immediately around the pond and fence could potentially have asbestos fibre contamination and should be tested.
- The soil/burnt material stockpile should not be disturbed until assessed for contamination.

2.1.2 480 Wainui Road

A demolition asbestos survey was carried out for the dwelling in the southeast of 480 Wainui Road by Overleaf Environmental Consultants in June 2022. Asbestos was found in roofing, soffits, gable ends, an electrical fuse box, and vinyl flooring. All asbestos was removed by a licensed asbestos removal contractor prior to demolition of the building.

Limited soil sampling carried out by GES following demolition did not find any heavy metal or PAH contamination. No potential asbestos contamination was observed.

2.1.3 9 Cemetery Road

A demolition asbestos survey was carried out for the dwelling in the southeast of 480 Wainui Road by Overleaf Environmental Consultants in October 2022. Asbestos was found in roofing, soffits and gable ends on the dwelling. Two lengths of asbestos-cement pipe (approximately 2.5 m long) were found on the ground surface south of the entry driveway. The asbestos in the dwelling and the two asbestos-cement pipes was removed by a licensed asbestos removal contractor prior to demolition of the building.

2.1.4 Lot 4 DP 353309

A PSI was carried out by GES in February 2025³ for the proposed wastewater treatment plant location in the south of Lot 4 DP 353309. The investigation area had been used as a contractor's yard, and stockpiles of soil, road millings, and gravel were observed on site. There were no indications of contamination within the stockpiles.

³ Groundwater & Environmental Services (24 February 2025). Preliminary Site Investigation. Proposed Wastewater Treatment Plant, Lot 4 DP 353309. Report prepared for Fulton Hogan Land Development Ltd.

Historic aerial photographs showed that the area had historically been undeveloped, and surrounding land was predominantly used for pastoral grazing. The aerial photographs did not provide any visible indications of potential contamination.

Walkover inspections of the area did not find any significant indications of potential contamination. A small area of recent rubbish burning was noted on the gravel hardstand. There appeared to be less than 1 m³ of residue from the burning, which was *de minimus* in terms of potential site contamination.

Five reconnaissance soil samples were collected on 7 November 2024 and analysed for potential contaminants. Four samples were collected from soil stockpiles on a further sample was collected from the base of a test pit in the yard. The soil samples contained heavy metals at levels that were within their normal background ranges and there were no detectable polycyclic aromatic hydrocarbons (PAHs) in any of the samples. Based on the results of the limited reconnaissance sampling, the potential for significant contamination at the site appeared low.

No HAIL activities were identified within the investigation area and the conceptual site model therefore determined that the source, pathway, receptor linkages for contamination were incomplete. Future activities within the investigation area were likely to be permitted activities under the NES and no additional investigation was recommended.

2.1.5 36 Sidwell Road

A PSI was carried out by GES in June 2024⁴ for parts of 36 Sidwell Road and Lot 4 DP 353309.

Historic aerial photographs showed that the investigation area had historically been undeveloped and surrounding land was predominantly used for pastoral grazing. A contractor's yard and track alongside Waterloo stream established on Lot 4 DP 353309 was associated with construction of a public wastewater pipe and pump station. The aerial photographs did not provide any visible indications of potential contamination within the investigation area.

A walkover inspection found that the investigation area within 36 Sidwell Road appeared to consist of pasture, with no indications of contamination. Much of the investigation area within Lot 4 DP 353309 was a contractor's yard. There were no issues identified on, or around, the site that would be likely to have resulted in contamination of the ground within it.

No HAIL activities were identified within the investigation area and the conceptual site model therefore determined that the source, pathway, receptor linkages for contamination were incomplete. Future activities within the investigation area were likely to be permitted activities under the NES and no additional investigation was recommended.

2.2 Dangerous Goods Licences

No known dangerous goods licences are known to have been held for properties within the site.

⁴ Groundwater & Environmental Services (24 February 2025). Preliminary Site Investigation. Proposed Wastewater Treatment Plant, Lot 4 DP 353309. Report prepared for Fulton Hogan Land Development Ltd.

2.3 Additional Review of Aerial Photographs

A detailed review of aerial photographs was carried out as part of this investigation to augment the data supplied by the earlier PSI. The most significant potential contamination issues inferred from the aerial photographs included:

- Previous commercial horticultural land use, with the potential for associated agri-chemical use, storage, and disposal.
- Use/disposal of asbestos-containing materials or lead-based paints in, and around, current or former site buildings.
- Possible fill or rubbish in areas of disturbed ground.

Areas that were thought to be likely to require additional investigation are listed in the table below for each of the properties making up the site. Specific points of interest identified in the aerial photographs are listed in more detail in the table in Appendix A, and the proposed investigation areas are shown on Figures 2 to 5.

Table 3 Items Identified in Aerial Photographs

Property	Observation (date observed)
602 Wainui Road	Dwelling in SW (1970s) Stream crossings and disturbed ground (1950s)
9 Cemetery Road	Dwelling in NE corner (1970s) Sheds and horticulture in west (1990s) Ponds (1990s-2010s) Earthworks (1950s)
597 Wainui Road	Dwelling in west (1980s) Silage trench in north (1950s) Pond (2000s)
569 Wainui Road	Dwelling (1980s) Pond (1950s)
Lot 8 DP 198205	Stream crossings & tracks (1940s-1950s) Ponds (1990 & 2024)
522 Wainui Road	Dwelling & sheds in SE (1950s-1970s) Stock yards (1990s)
500 Wainui Road	Dwelling/shed in NE (1940s-1960s) Dwelling in SE (1950s) Commercial horticulture (1940s-1980s) Stockyards (1960s)
480 Wainui Road	Sheds (1940s & 1960s) Dwelling in SE (1980s) Commercial horticulture (1970s)
Lot 12 DP 198205	Shed/yard in northwest (1940s) Possible fill areas (1980s-2024) Silage pit (1950s)
Lot 4 DP 353309	Contractor's yard in SW (2021)
36 Sidwell Road	No items identified

2.4 Information from Property Owners

The current property owner for the site (Fulton Hogan Land Development Ltd) is not aware of any actual or potential contamination issues within the investigation area other than those flagged by previous investigations. Previous owners of the properties across site were unable to be interviewed as part of this investigation.

The farm manager for the bulk of the site was interviewed regarding potential issues. A summary of the key results of the interview is provided below:

- As far as the farm manager was aware, no potentially hazardous materials had been dumped on site over the time that he had been involved.
- Areas of previous rubbish dumping were present on Lot 12 DP 198205 in the former silage pit and in a drainage gully in the northwest.
- Former commercial horticulture on Lot 12 DP 198205 involved plant propagation and was carried out by the former owner/occupier of 522 Wainui Road.

3 Site Walkover Inspection Results

Walkover inspection of site was carried out on 15 and 16 February 2026. Observations from the walkover are discussed below.

3.1 *Nature and Extent of Anticipated Contamination*

At the time of the inspection, available information suggested that there were some potential sources of historic or recent contamination within site. The bulk of the potential contamination issues related general farming or horticulture activities, and the former presence and demolition of site buildings. They included:

- Possible former horticulture.
- The presence of stockyards.
- Current or former dwelling and shed locations on several properties.
- Possible farm rubbish or demolition material dumping areas.
- Tracks and stream crossings.

3.2 *Walkover Observations*

Potential areas of contamination identified during the walkover inspection are outlined in the table below.

A more detailed record is provided in Appendix A, which includes selected photographs taken during the inspections. Numbered locations for the walkover inspection observations are shown on Figures 6 to 12.

Potential contamination issues that required further investigation were identified at several of the individual properties making up the site. There were no visible issues identified at the remaining properties, or in the surrounding area that would be likely to have resulted in contamination of the ground within the site.

Potential contamination issues identified by the aerial photograph review and walkover inspection were targeted for sampling and analysis.

Table 4 Items Identified by Inspection

Property	Observation (date observed)
602 Wainui Road	No visible indications of potential contamination
9 Cemetery Road	No visible indications of potential contamination
597 Wainui Road	No visible indications of potential contamination
569 Wainui Road	No visible indications of potential contamination
Lot 8 DP 198205	ACM sheet pieces in track west of river crossing in north of property.
522 Wainui Road	ACM visible on, and around, dwelling. ACM sheet pieces on ground north of open bay shed. ACM sheets in fence east of sheds. Rubbish burning area north of sheds/yards
500 Wainui Road	Shipping container on concrete slab in former dwelling/shed area, with gravel in the surrounding ground. Dwelling in SE corner has an ACM planter on the ground south of the dwelling. Potential for lead contamination around the dwelling. Stockyards remain on site.
480 Wainui Road	No visible indications of potential contamination
Lot 12 DP 198205	Farm and household rubbish found in former silage pit in NE and gully in the northwest. Buried rubbish and demolition material in east bank of stream in north of property Remains of former groundwater pump shed by east boundary. ACM sheet pieces in demolition material stockpile and stream crossing.
Lot 4 DP 353309	No visible indications of potential contamination
36 Sidwell Road	No visible indications of potential contamination

4 HAIL Activities

The Ministry for the Environment's Hazardous Activities and Industries List (HAIL) specifies activities/industries that have the potential to result in contamination. Where current or former HAIL activities are identified, intrusive investigation is generally required prior to a change in land use or redevelopment. Actual/potential HAIL activities for the site are evaluated in Table 5 using the information gathered for this investigation. The selection of potential HAIL activities was based on information gathered about the site and experience on sites with similar history.

Table 5 Potential HAIL Activities

HAIL ID	Description	Assessment
A.8	Livestock dip or spray race operations	Possible No evidence for livestock dip or spray race structures. Stock handling yards identified.
A.10	Persistent pesticide bulk storage or use	Likely Aerial evidence of commercial-scale horticulture on some properties.
A.17	Storage tanks or drums for fuel, chemicals or liquid-based	Possible No visual evidence of significant fuel/chemical storage within, or around, the site. Storage of fuel for farm use is however possible.
E.1	Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition	Confirmed Actual and potential ACM identified at specific locations across the site. Former use of ACM possible at other locations.
G.3	Landfill sites	Confirmed Farm rubbish burial confirmed in the stream bank and on the surface (and possibly buried) at two other locations on Lot 12 DP 198205
G.5	Waste disposal to land (excluding where biosolids have been used as soil conditioners)	Unlikely No indications for any waste disposal to land within the investigation area other than noted in G.3.
H	Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment	Highly Unlikely No potentially hazardous substances that would be likely to affect the investigation area are likely to be present on other adjacent land.
I	Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment	Confirmed Ash from rubbish burning on 522 Wainui Road No evidence to suggest that there would have been any other significant releases of hazardous substances to land within the investigation area.

4.1 Preliminary Conceptual Site Model

The information gathered for this PSI has been used to prepare a preliminary conceptual site model (CSM) for the site to determine whether intrusive investigation is required. The CSM provided in Table 6 evaluates contaminant source, pathway, and receptor linkages for potential items of concern during redevelopment or under future residential, or recreational land use.

Table 6 Preliminary Conceptual Site Model

Potential Source	Potential Pathways	Potential Receptors	Assessment
Contaminated Soil due to HAIL Activities	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Potentially complete: HAIL Activities identified within specific parts of the site
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	
	Inhalation of vapours	Human Health - residential and outdoor worker	
	Surface water run-off	Ecological receptors – Waterloo Stream	
	Migration of groundwater	Ecological receptors – Waterloo Stream	

The preliminary conceptual site model identifies that the source, pathway, receptor linkages as potentially complete as HAIL activities were identified within specific parts of the site. Assessment of the presence of contamination within and around the areas of HAIL activities is required.

5 Intrusive Investigation and Sampling

Intrusive investigation and sampling targeting areas of potential contamination was carried out on 1, 4, 6, and 8 March 2026.

The main areas that were to be targeted by the sampling are set out on the following table, along with likely potential contaminants. The locations of the numbered areas are shown on Figures 2 to 5.

Table 7 Proposed Sampling Plan

Address	Number	Description	Potential Contamination
Lot 12	1	Pump Shed	Heavy Metals,
	2	Silage trench rubbish	Heavy metals
	3	Stream edge rubbish	Heavy metals, MRPs, PAHs
	4	Gully head rubbish	Heavy metals, MRPs, PAHs
	5	Horticulture area	Heavy metals, MRPs
	6	Horticulture area	Heavy metals, MRPs
	7	Demolition stockpile	Heavy metals, Asbestos
	8	Former shed & yard	Heavy metals, MRPs, Asbestos
480 Wainui Road	9	Horticulture area	Heavy metals, MRPs
	10	Former shed	Heavy metals, Asbestos?
	11	Former shed	Heavy metals, Asbestos
500 Wainui Road	12	Horticulture area	Heavy metals, MRPs
	13	Former dwelling/shed	Heavy metals, MRPs, Asbestos
	14	Horticulture area	Heavy metals, MRPs
	15	Stockyards	Heavy metals, MRPs
	16	Former shed	Heavy metals, MRPs
	17	Dwelling & shed	Heavy metals, PAHs
	18	Stockyards	Heavy metals, MRPs
522 Wainui Road	19	Dwelling, sheds & yards	Heavy metals, PAHs, MRPs, Asbestos
Lot 8	20	Track ACM	Asbestos
602 Wainui Road	21	Dwelling at 602 Wainui Rd	Sampling not required
597 Wainui Road	22	Dwelling at 597 Wainui Rd	Sampling not required
9 Cemetery Road	23	Dwelling & shed	Heavy metals, MRPs, Asbestos
	24	Horticulture area	Heavy metals, MRPs

General observations and details of sampling procedures, material logs and analytical results are provided in the following sections.

5.1 General Observations

The site was largely as shown on the most recent aerial photographs. The bulk of the site is in pasture.

5.2 Soil Sampling

The samples were collected according to the methods outlined in the following sections. Sample locations are shown on Figures 13 to 15. The sampling was carried out in accordance with the requirements of the Ministry for the Environment's Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (June 2021).

Two samples were typically collected from each location. A shallow sample was generally taken from between the ground surface and 0.15 m depth. A deeper sample was generally taken from between 0.15 m and 0.3 m depth. Sample depth ranges were varied at some locations to take account of the materials being sampled and expected depth of contaminants.

5.2.1 Sampling Method

Each sampling location was set out prior to the start of sampling.

Soil samples were collected using a stainless-steel trowel, push sampler, or hand auger as appropriate. Each sample was placed into a stainless-steel mixing bowl before being homogenised and placed into the appropriate labelled sample jar. Where duplicate samples were collected, the homogenised sample was split evenly between two sample containers.

Samples of building materials for asbestos analysis were picked up using clean gloved hands and placed into a labelled zip-lock bag. The zip-lock bag was placed inside another zip-lock bag in accordance with Hill Laboratories sample receipt requirements.

The sample jars and zip-lock bags were supplied by Hill Laboratories.

Ten sets of duplicate samples were collected for quality assurance purposes.

5.2.2 Sample Handling

Samples for chemical analysis were placed into 250 ml glass jars, sealed and put directly into a cold chilly bin. The samples were kept in cold storage for delivery to Hill Laboratories under chain of custody documentation.

Soil samples for asbestos analysis were placed into 500 ml plastic jars, sealed and put directly into a chilly bin for delivery to Hill Laboratories under chain of custody documentation.

Samples of building materials for asbestos analysis were double bagged in zip-lock bags. The samples were placed into a chilly bin for delivery to Hill Laboratories under chain of custody documentation.

Each sample was given a unique identification number as follows:

Site Identifier/Year Reference/Sample Number

The client identifier was "MN", the year reference was "26", and the sample number was a 3-digit number starting from 001.

5.2.3 Equipment Decontamination

Sampling equipment was decontaminated prior to use at each sample location by rinsing in a potable water bath, washing in a solution of potable water and Decon 90 (a zero-residue analytical detergent), and rinsing in another bath of potable water.

The nature of hand auger sampling means that there is potential for contamination of deeper samples with material from the shallower part of the hole. Efforts were made during sampling to minimise any such contamination.

5.3 Material Descriptions

The sample locations, depth ranges, and geologic materials encountered during the sampling are provided in Appendix B to this report.

Attention was paid to the possible presence of indicators of chemical contamination. Typical chemical contamination indicators would usually include unusual colouring, visible chemical residues, the presence of refuse, and noticeable odours. Attention was also paid to the possible presence of visible asbestos containing materials such as asbestos cement sheet pieces.

5.4 Site Contamination Guidelines

A range of numerical guidelines have been published, against which site contaminant concentrations can be compared to determine the degree of risk that they present to human health and the environment. Representative values have also been published for the normal range of concentrations of metals in both non-volcanic-derived and volcanic-derived soils from the Auckland Region.

For the purposes of this investigation, heavy metal concentrations have been compared to the non-volcanic-derived background ranges for soils from the Auckland region.

Contaminant concentrations are compared to the permitted activity criteria for potential discharges of contaminants to the environment as specified in E30.6.1.4 of the Auckland Unitary Plan. The concentrations are also compared to the National Environmental Standards for the protection of human health on residential land with 10% home-grown produce consumption, and for outdoor worker protection. Any change to a more sensitive land use would require a review of the standards used.

The relevant background concentrations, permitted activity criteria, and national environmental standards are provided in the analytical results tables.

The comparison of guidelines with actual site contamination provides guidance on the potential risks presented by the site contamination. The need for remediation or controls on access to contamination is established by evaluating the actual risk on a site-specific basis. Factors involved in this evaluation include the physical and chemical characteristics of the contaminants, their toxicity, and the ease of exposure of humans, plants, and animals to contaminants in soil, air, and water.

6 Analytical Results

Samples were delivered under cold storage to Hill laboratories for chemical and asbestos analysis as soon as possible following their collection. Requested analyses targeted likely potentially significant contaminants for each location.

For areas with similar history and expected contamination (such as horticulture blocks), composite samples of between two and four individual samples were created in the laboratory and analysed for multi-residue pesticides (MRPs). The individual samples from these locations were also analysed for selected heavy metals. Some individual samples were analysed for other contaminants such as polycyclic aromatic hydrocarbons (PAHs), MRPs, or asbestos in soil (NZ Guidelines Semi-Quantitative Asbestos Analysis).

Analytical results for chemical analyses undertaken on individual samples are summarised in **Table 8**. The results for the composite sample analyses are presented in **Table 9**. Asbestos in soil results are presented in **Table 10**, while the results for asbestos analysis of building material samples are presented in **Table 11**.

Laboratory analytical reports from Hill Laboratories are reproduced in full in Appendix C and the results are discussed in following sections with reference to the appropriate guidelines.

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Table 8 Analytical Results – Individual Samples (mg/kg)

Location	Sample	Depth	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc	Total PAHs	BaP Eq	Total MRP
8	MN26007	0-0.15	3	0.38	22	12	47	52	300	-	-	
	MN26008	0.15-0.3	< 2	0.1	7	5	11.6	14	53	-	-	
	MN26009	0-0.15	3	0.34	18	12	30	33	390	-	-	
	MN26010	0.15-0.3	< 2	0.15	35	6	14.1	69	132	-	-	
	MN26011	0-0.15	2	0.47	16	9	23	36	171	-	-	
	MN26012	0.15-0.3	< 2	0.12	7	3	8.6	7	27	-	-	
	MN26013	0-0.15	< 2	1.41	36	14	22	78	152	-	-	
	MN26014	0.15-0.3	< 2	0.14	5	3	4.4	12	18	-	-	
	MN26015	0-0.15	< 2	< 0.10	< 2	< 2	2.4	< 2	< 4	-	-	ND
	MN26016	0.15-0.3	< 2	< 0.10	6	< 2	5.9	< 2	< 4	-	-	ND
	MN26017	0-0.15	< 2	0.19	7	4	6.7	11	16	-	-	ND
	MN26018	0.15-0.3	2	< 0.10	8	4	7.9	3	8	-	-	ND
4	MN26019	0-0.15	7	0.97	10	118	82	25	900	< 0.4	< 0.039	ND
	MN26020	0-0.15	7	0.82	9	88	89	24	750	< 0.4	< 0.035	ND
	MN26021	0.15-0.3	< 2	0.39	7	14	12.6	16	450	< 0.4	< 0.037	ND
7	MN26024	0-0.15	4	0.15	12	20	12.6	12	59	-	-	
6	MN26025	0.15-0.3	< 2	0.16	5	4	6.1	3	5	-	-	
	MN26026	0-0.15	< 2	< 0.10	4	3	4.3	< 2	< 4	-	-	
	MN26027	0.15-0.3	< 2	0.13	5	5	7.8	3	< 4	-	-	
	MN26028	0-0.15	< 2	< 0.10	4	5	7	< 2	< 4	-	-	
	MN26029	0.15-0.3	< 2	0.13	5	5	5.3	2	< 4	-	-	
	MN26030	0-0.15	< 2	< 0.10	4	7	9.4	< 2	< 4	-	-	
	MN26031	0.15-0.3	< 2	0.35	10	8	8.7	12	14	-	-	
	MN26032	0.15-0.3	< 2	0.33	9	7	7.9	10	12	-	-	
	MN26033	0-0.15	< 2	< 0.10	6	7	6.1	< 2	< 4	-	-	
	MN26034	0.15-0.3	< 2	0.12	6	8	7.6	2	4	-	-	

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	MN26035	0-0.15	< 2	< 0.10	7	7	6.4	< 2	< 4	-	-	
	MN26036	0.15-0.3	< 2	0.18	4	5	6.6	< 2	4	-	-	
	MN26037	0-0.15	< 2	< 0.10	5	3	4.8	< 2	< 4	-	-	
5	MN26038	0.15-0.3	< 2	0.14	3	< 2	3.8	< 2	< 4	-	-	ND
	MN26039	0-0.15	< 2	< 0.10	3	< 2	3.7	< 2	< 4	-	-	ND
	MN26040	0.15-0.3	< 2	0.12	8	10	11.4	2	13	-	-	
	MN26041	0-0.15	< 2	< 0.10	9	7	10.1	2	6	-	-	
	MN26042	0.15-0.3	< 2	0.17	8	11	10.2	< 2	6	-	-	
	MN26043	0-0.15	< 2	< 0.10	7	10	8.2	< 2	< 4	-	-	
	MN26044	0-0.15	< 2	0.34	8	15	9.2	3	29	-	-	
	MN26045	0-0.15	< 4	0.3	8	16	9.9	< 4	30	-	-	
	MN26046	0.15-0.3	2	0.2	7	12	11.4	< 2	5	-	-	
	MN26047	0-0.15	< 2	0.21	8	11	9.9	< 2	9	-	-	
	MN26048	0.15-0.3	< 4	< 0.2	6	12	14.8	< 4	< 8	-	-	
	MN26049	0-0.15	< 2	0.29	7	15	8.4	3	8	-	-	
	MN26050	0.15-0.3	< 2	< 0.10	5	8	7	< 2	< 4	-	-	
	MN26051	0-0.15	< 2	0.22	7	10	8.9	2	5	-	-	
	MN26052	0.15-0.3	< 2	< 0.10	6	11	6.5	< 2	< 4	-	-	
	MN26053	0-0.15	< 2	0.22	6	10	8.9	< 2	< 4	-	-	
	MN26054	0.15-0.3	< 2	< 0.10	6	9	8	< 2	< 4	-	-	
	MN26055	0-0.15	< 2	0.24	5	5	5.5	< 2	10	-	-	
	MN26056	0.15-0.3	< 2	< 0.10	4	4	5.1	< 2	6	-	-	
	MN26057	0.15-0.3	< 2	< 0.10	3	3	4.5	< 2	6	-	-	
	MN26058	0-0.15	< 2	< 0.10	5	4	5.9	< 2	5	-	-	
	MN26059	0.15-0.3	< 2	< 0.10	5	4	5.3	< 2	< 4	-	-	
16	MN26060	0-0.15	6	0.29	8	12	69	12	77	-	-	0.039
14	MN26062	0-0.15	5	0.31	9	14	22	4	73	-	-	0.068
13	MN26064	0-0.15	3	0.36	7	14	650	6	175	0.056	< 0.033	
	MN26065	0.15-0.3	< 2	< 0.10	4	3	300	< 2	56	0.014	< 0.031	

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	MN26066	0-0.15	5	0.29	11	56	183	20	260	0.105	< 0.029	
	MN26067	0.15-0.3	5	0.52	14	39	320	59	410	0.192	0.035	
9	MN26068	0-0.15	< 2	0.16	6	3	6.7	2	< 4	-	-	-
	MN26069	0.15-0.3	< 2	< 0.10	4	4	5.8	< 2	< 4	-	-	-
	MN26070	0-0.15	< 2	0.24	6	5	7.1	< 2	< 4	-	-	-
	MN26071	0.15-0.3	< 2	< 0.10	7	9	7	< 2	< 4	-	-	-
	MN26072	0-0.15	< 2	0.28	8	6	6.7	< 2	11	-	-	-
	MN26073	0.15-0.3	< 2	0.1	8	3	4.7	2	< 4	-	-	-
	MN26074	0-0.15	< 2	0.26	7	5	7.9	3	11	-	-	-
	MN26075	0.15-0.3	< 2	< 0.10	4	3	3.6	< 2	< 4	-	-	-
	MN26076	0-0.15	< 2	< 0.10	7	9	9	< 2	< 4	-	-	-
	MN26077	0.15-0.3	< 2	< 0.10	9	11	9.9	< 2	< 4	-	-	-
	MN26078	0.15-0.3	< 2	< 0.10	9	11	11	< 2	< 4	-	-	-
12	MN26079	0-0.15	< 2	0.36	8	9	11.2	< 2	8	-	-	-
	MN26080	0.15-0.3	< 2	< 0.10	12	12	12	2	< 4	-	-	-
	MN26081	0-0.15	< 2	0.34	9	12	9.2	< 2	6	-	-	-
	MN26082	0.15-0.3	< 2	< 0.10	7	11	8.3	< 2	< 4	-	-	-
	MN26083	0-0.15	< 2	0.33	7	11	8.4	2	6	-	-	-
	MN26084	0.15-0.3	< 2	< 0.10	6	9	6.9	< 2	< 4	-	-	-
	MN26085	0-0.15	< 2	0.37	10	20	13.1	2	10	-	-	-
	MN26086	0.15-0.3	< 2	< 0.10	7	13	10.2	< 2	< 4	-	-	-
	MN26087	0-0.15	< 2	0.47	10	13	10.9	2	12	-	-	-
	MN26088	0-0.15	< 2	0.46	10	13	11.2	2	11	-	-	-
	MN26089	0.15-0.3	< 2	< 0.10	6	10	9	< 2	< 4	-	-	-
	MN26090	0-0.15	< 2	0.24	5	12	9.2	< 2	5	-	-	-
	MN26091	0.15-0.3	< 2	< 0.10	12	8	8.3	4	< 4	-	-	-
	MN26092	0-0.15	< 2	0.23	8	9	10.3	< 2	6	-	-	-
	MN26093	0.15-0.3	2	< 0.10	9	14	12.3	< 2	< 4	-	-	-
	MN26094	0-0.15	3	0.6	15	21	17.4	3	15	-	-	-

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	MN26095	0.15-0.3	3	< 0.10	11	15	15.4	< 2	< 4	< 0.4	< 0.040	-
	MN26096	0-0.15	< 2	0.43	10	17	11.3	2	8	-	-	-
	MN26097	0.15-0.3	< 2	< 0.10	8	15	12.4	< 2	< 4	< 0.4	< 0.041	-
23	MN26098	0-0.15	5	< 0.10	8	11	16.2	6	98			
	MN26099	0.15-0.3	5	< 0.10	8	5	22	2	11			
	MN26101	0-0.15	9	0.11	9	11	23	4	80			
	MN26102	0.15-0.3	3	0.13	7	4	14.4	3	15			
	MN26104	0-0.15	4	< 0.10	7	22	16.1	4	34			
	MN26105	0.15-0.3	4	< 0.10	8	14	20	2	18			
	MN26107	0-0.15	10	0.12	21	340	23	26	65			
	MN26108	0.15-0.3	9	< 0.10	12	11	18.3	3	9			
	MN26110	0-0.15	5	0.15	7	9	14.7	3	19			
	MN26111	0-0.15	5	0.14	8	12	15.3	3	19			
	MN26112	0.15-0.3	2	< 0.10	4	< 2	17.7	< 2	5			
	MN26114	0-0.15	4	0.23	8	7	13	5	22			
	MN26115	0.15-0.3	5	< 0.10	7	4	22	< 2	8			
24	MN26116	0-0.15	4	0.14	6	21	9.2	4	39			
	MN26117	0.15-0.3	4	< 0.10	6	7	17.7	< 2	9			
	MN26118	0-0.15	6	0.12	9	19	10.4	4	31			
	MN26119	0.15-0.3	4	< 0.10	8	10	21	2	19			
	MN26120	0-0.15	4	0.1	5	6	7.1	3	15			
	MN26121	0.15-0.3	3	< 0.10	5	6	13.3	< 2	6			
	MN26122	0-0.15	3	< 0.10	7	9	11	5	15			
	MN26123	0-0.15	3	< 0.10	7	9	11.1	5	15			
	MN26124	0.15-0.3	8	< 0.10	7	7	17.8	< 2	9			
	MN26125	0-0.15	2	< 0.10	5	4	8.9	3	7			
	MN26126	0.15-0.3	< 2	< 0.10	3	2	9.2	< 2	< 4			
	MN26127	0-0.15	2	0.14	5	6	6.9	4	11			
	MN26128	0.15-0.3	< 2	0.11	4	3	5.2	2	5			

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	MN26129	0-0.15	4	0.19	8	9	11.7	6	22			
	MN26130	0.15-0.3	2	0.14	6	3	9.6	< 2	8			
	MN26131	0-0.15	4	0.23	7	7	9.3	2	12			
	MN26132	0.15-0.3	2	0.15	5	4	7	< 2	6			
2	MN26133	0-0.15	2	0.21	8	18	9.3	4	155	< 0.4	< 0.031	-
	MN26134	0.15-0.3	< 2	< 0.10	8	5	6.4	< 2	13	< 0.4	< 0.031	-
	MN26135	0-0.15	15	0.65	36	78	95	35	4900	< 0.4	< 0.033	-
	MN26136	0.15-0.6	23	1.42	44	181	167	31	840	0.077	< 0.030	-
1	MN26137	0-0.15	2	0.46	9	21	39	8	570	-	-	-
	MN26138	0.15-0.6	< 2	0.13	6	9	10.1	< 2	107	-	-	-
15	MN26139	0-0.1	3	0.17	11	51	6.7	21	99	-	-	ND
13	MN26140	0-0.15	4	0.35	22	22	199	35	152	0.755	0.062	-
	MN26141	0.15-0.3	< 2	0.13	5	9	54	9	83	-	-	-
	MN26142	0-0.15	15	0.51	16	29	830	18	520	0.188	< 0.030	-
	MN26143	0-0.15	15	0.52	15	28	800	19	520	0.453	0.038	-
	MN26144	0.15-0.3	< 2	0.14	2	7	91	2	127	-	-	-
10	MN26145	0-0.15	< 2	0.3	5	3	3.7	< 2	7	-	-	-
	MN26146	0.15-0.3	3	< 0.10	5	< 2	6.7	< 2	< 4	-	-	-
19	MN26147	0-0.15	-	-	-	-	58	-	-	-	-	-
	MN26148	0.15-0.3	-	-	-	-	10.9	-	-	-	-	-
	MN26149	0-0.15	-	-	-	-	19.8	-	-	-	-	-
	MN26150	0.15-0.3	-	-	-	-	7.5	-	-	-	-	-
	MN26151	0-0.15	37	0.77	21	40	98	9	880	-	-	-
	MN26152	0.15-0.3	13	< 0.10	3	2	6.4	< 2	49	-	-	-
	MN26153	0-0.12	4	< 0.10	40	48	13.2	163	70	-	-	ND
	MN26154	0-0.08	6	0.22	9	29	7.1	8	78	-	-	ND
	MN26155	0-0.1	-	-	-	-	-	-	192	-	-	-
	MN26156	0-0.15	1090	1.41	360	1420	4100	36	1570	< 0.3	< 0.026	-
	MN26157	0-0.15	1120	1.44	370	1270	7500	37	1400	< 0.3	< 0.026	-

Groundwater and Environmental Services

	MN26158	0.15-0.3	16	0.11	9	26	38	< 2	30	< 0.3	< 0.028	-
Background - Non-Volcanic			0.4-12	<0.1-0.65	2-55	1-45	<1.5-65	0.9-35	9-180	-	-	-
NES Residential (10%)			20	3	460	NL	210	400	7400	-	10	-
NES-Recreational			80	400	2700	NL	880	2400	28000	-	40	-
NES - Outdoor Worker			70	1300	6300	NL	3300	3000	31000	-	35	-
Permitted Activity Criteria			100	7.5	400	325	250	105	400	-	20	-

Notes:

1. NL denotes "Not Limited" (>10,000 mg/kg).
2. Bold heavy metal values exceed the upper end of the natural background range for Auckland Region non-volcanic soils
3. Shaded values exceed the National Environmental Standard for residential land use with 10% home-grown produce consumption.
4. Red values exceed the Auckland Unitary Plan permitted activity criteria for environmental protection.

Groundwater and Environmental Services

Table 9 Analytical Results - Composite Samples – Multi-Residue Pesticides (mg/kg)

Location	Sample Name	Depth	MRPs	4,4'-DDE	Dieldrin
8	Composite of MN26007, MN26009, MN26011 & MN26013	0-0.15	ND	< 0.014	< 0.014
	Composite of MN26008, MN26010, MN26012 & MN26014	0.15-0.3	ND	< 0.013	< 0.013
6	Composite of MN26025, MN26027 & MN26029	0-0.15	ND	< 0.014	< 0.014
	Composite of MN26026, MN26028 & MN26030	0.15-0.3	ND	< 0.014	< 0.014
	Composite of MN26031, MN26034 & MN26036	0-0.15	ND	< 0.014	< 0.014
	Composite of MN26033, MN26035 & MN26037	0.15-0.3	ND	< 0.015	< 0.015
5	Composite of MN26040, MN26042 & MN26044	0-0.15	0.108	< 0.016	0.108
	Composite of MN26041, MN26043 & MN26046	0.15-0.3	0.019	< 0.015	0.019
	Composite of MN26047, MN26049 & MN26051	0-0.15	0.076	0.016	0.06
	Composite of MN26048, MN26050 & MN26052	0.15-0.3	ND	< 0.015	< 0.015
	Composite of MN26053, MN26055 & MN26058	0-0.15	0.055	< 0.014	0.055
	Composite of MN26054, MN26056 & MN26059	0.15-0.3	ND	< 0.014	< 0.014
9	Composite of MN26068, MN26070 & MN26072	0-0.15	ND	< 0.015	< 0.015
	Composite of MN26069, MN26071 & MN26073	0.15-0.3	ND	< 0.015	< 0.015
	Composite of MN26074 & MN26076	0-0.15	ND	< 0.017	< 0.017
	Composite of MN26075 & MN26078	0.15-0.3	ND	< 0.017	< 0.017
12	Composite of MN26079, MN26081 & MN26083	0-0.15	ND	< 0.017	< 0.017
	Composite of MN26080, MN26082 & MN26084	0.15-0.3	ND	< 0.016	< 0.016
	Composite of MN26085, MN26087 & MN26090	0-0.15	ND	< 0.016	< 0.016
	Composite of MN26086, MN26089 & MN26091	0.15-0.3	ND	< 0.016	< 0.016
	Composite of MN26092, MN26094 & MN26096	0-0.15	ND	< 0.017	< 0.017
	Composite of MN26093, MN26095 & MN26097	0.15-0.3	ND	< 0.017	< 0.017
23	Composite of MN26110 & MN26114	0-0.15	ND	< 0.013	< 0.013
	Composite of MN26112 & MN26115	0.15-0.3	ND	< 0.014	< 0.014
24	Composite of MN26116, MN26118, MN26120 & MN26122	0-0.15	ND	< 0.013	< 0.013
	Composite of MN26117, MN26119, MN26121 & MN26124	0.15-0.3	ND	< 0.014	< 0.014
	Composite of MN26125, MN26127, MN26129 & MN26131	0-0.15	ND	< 0.013	< 0.013

Groundwater and Environmental Services

	Composite of MN26126, MN26128, MN26130 & MN26132	0.15-0.3	ND	< 0.012	< 0.012
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Table 10 Analytical Results - Asbestos in Soil

Location	Sample Name:	Depth Range	Asbestos Presence / Absence	Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample % w/w
8	MN26022	0-0.15	Asbestos NOT detected.	< 0.001
	MN26023	0.15-0.3	Asbestos NOT detected.	< 0.001
7	MN26024	0-0.15	Asbestos NOT detected.	< 0.001
23	MN26100	0-0.15	Asbestos NOT detected.	< 0.001
	MN26103	0.15-0.3	Asbestos NOT detected.	< 0.001
	MN26106	0-0.15	Asbestos NOT detected.	< 0.001
	MN26109	0.15-0.3	Asbestos NOT detected.	< 0.001
19	MN26159	0-0.15	Asbestos NOT detected.	< 0.001
	MN26160	0-0.15	Asbestos NOT detected.	< 0.001
BRANZ Soil Guideline Value				0.001

Notes: ND denotes “Not Detected”

Combined FA+ AF denotes “Combined Fibrous Asbestos + Asbestos Fines”

Table 11 Analytical Results - Asbestos in Building Material Results

Sample Name	Amosite	Chrysotile	Crocidolite	Organic Fibres	Synthetic Mineral Fibres	Unknown Asbestos	Sample Category	Asbestos Presence / Absence
Lot 12								
MN26001	Detected	Detected	ND	ND	ND	ND	Fibre Cement	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.
Lot 8								
MN26002	Detected	Detected	ND	ND	ND	ND	Fibre Cement	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.

Notes: ND denotes “Not Detected”

6.1 Quality Assurance/Quality Control

In addition to standard laboratory QA/QC, ten sets of duplicate samples were collected in the field to assess the variation of the analytical results and/or the homogeneity of the samples.

The results from the duplicate samples are presented in **Table 12**, along with the calculated relative percentage difference (RPD) for each analyte. Ministry for the Environment guidelines suggest that a relative percentage difference of less than 30-50% is generally acceptable.

Table 12 Comparison of Duplicate Samples

Sample Name	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc	BaP Eq
MN26019	7	0.97	10	118	82	25	900	< 0.039
MN26020	7	0.82	9	88	89	24	750	< 0.035
RPD	0	-17	-11	-29	8	-4	-18	NC
MN26031	< 2	0.35	10	8	8.7	12	14	-
MN26032	< 2	0.33	9	7	7.9	10	12	-
RPD	NC	-6	-11	-13	-10	-18	-15	-
MN26044	< 2	0.34	8	15	9.2	3	29	-
MN26045	< 4	0.3	8	16	9.9	< 4	30	-
RPD	NC	-13	0	6	7	NC	3	-
MN26056	< 2	< 0.10	4	4	5.1	< 2	6	-
MN26057	< 2	< 0.10	3	3	4.5	< 2	6	-
RPD	NC	NC	-29	-29	-13	NC	0	-
MN26077	< 2	< 0.10	9	11	9.9	< 2	< 4	-
MN26078	< 2	< 0.10	9	11	11	< 2	< 4	-
RPD	NC	NC	0	0	11	NC	NC	-
MN26087	< 2	0.47	10	13	10.9	2	12	-
MN26088	< 2	0.46	10	13	11.2	2	11	-
RPD	NC	-2	0	0	3	0	-9	-
MN26110	5	0.15	7	9	14.7	3	19	-
MN26111	5	0.14	8	12	15.3	3	19	-
RPD	0	-7	13	29	4	0	0	-
MN26122	3	< 0.10	7	9	11	5	15	-
MN26123	3	< 0.10	7	9	11.1	5	15	-
RPD	0	NC	0	0	1	0	0	-
MN26142	15	0.51	16	29	830	18	520	< 0.030
MN26143	15	0.52	15	28	800	19	520	0.038
RPD	0	2	-6	-4	-4	5	0	NC
MN26156	1090	1.41	360	1420	4100	36	1570	< 0.026
MN26157	1120	1.44	370	1270	7500	37	1400	< 0.026
RPD	3	2	3	-11	59	3	-11	NC

Notes:

1. All results are given in mg/kg.
2. “**NC**” signifies a RPD that could not be calculated due to one or more of the results being below the analytical detection limit.

RPDs could not be calculated for results where one or both values were below the analytical detection limits.

Apart from the RPD for lead for samples MN26156 and 157 (RPD of 59%), the calculated RPDs for heavy metals were all within the generally acceptable guidelines. The RPD for lead for samples MN26156 and 157 is higher than generally accepted and is likely indicative of heterogeneous distribution of lead within the sampled material.

RPDs could not be calculated for the PAHs as they were not present in both duplicate samples at levels above the analytical detection limits. The results can however be seen as broadly consistent between the analysed duplicates.

Based on the RPDs that could be calculated and the consistency of results where no contaminants were present at levels above the analytical detection limits, the sampling and analysis of the duplicates appears to be providing repeatable results.

Standard QA/QC reports from the analytical laboratories were not reviewed for this report but are available from the laboratories if required.

6.2 Discussion of Analytical Results

Sample locations with detectable contamination are summarised in **Table 13** along with a description of the type(s) of contamination.

Soil contamination at levels above or below relevant guidelines for health and/or environmental protection was detected in samples from:

- Lot 12 DP 198205
- 500 Wainui Road
- 522 Wainui Road
- Lot 8 DP 198205
- 9 Cemetery Road

No soil contamination was detected at the other sampled properties. No sampling was able to be undertaken around the dwelling and shed in the southeast of 500 Wainui Road. Sampling in this area should be carried out prior to demolition of the buildings and any other earthworks. The results from the sampling should be included in a revised SMP/RAP if necessary.

The presence of asbestos-containing material was confirmed at the following properties:

- Lot 12 DP 198205
- 522 Wainui Road
- Lot 8 DP 198205

Table 13 Detected Contamination

Address	Location Number	Description	Detected Contamination
Lot 12	1	Pump Shed	Zinc above environmental guidelines
	2	Silage trench rubbish	Heavy metals (arsenic, cadmium, copper, and lead) below guidelines Zinc above environmental criteria at one location (135/6) Arsenic above residential guidelines at one location (136) PAHs below guidelines
	3	Stream edge rubbish	Not able to access for sampling
	4	Gully head rubbish	Heavy metals (cadmium, nickel, and lead) below guidelines Zinc above environmental criteria
	5	Horticulture area 1	No heavy metal contamination DDE & dieldrin below guidelines in some samples
	6	Horticulture area 2	Heavy metals within background ranges
	7	Demolition stockpile & stream crossing	Heavy metals within background ranges Asbestos-containing material on track surface (110)
	8	Former shed & yard	Heavy metals (cadmium, nickel, and zinc) below guidelines
480 Wainui Road	9	Horticulture area 3	Heavy metals within background ranges No detectable pesticides
	10	Former shed (1940s)	Heavy metals within background ranges
	11	Former shed (1940s)	Not sampled
500 Wainui Road	12	Horticulture area 4	Heavy metals within background ranges No detectable pesticides
	13	Former dwelling/shed	Heavy metals (arsenic, copper, lead, nickel, and zinc) below guidelines PAHs below guidelines Lead above environmental criteria (64, 65 & 67) Zinc above environmental criteria (67) Lead above residential guideline (64, 65 & 67)
	14	Horticulture area 5	Heavy metals within background ranges Bromophos-ethyl and dieldrin contamination below guidelines
	15	Stockyards	Copper slightly above background range
	16	Former shed (1940s)	Lead contamination below guidelines Dieldrin contamination below guidelines
	17	Dwelling & shed (1950s)	Not sampled
	18	Stockyards	Copper & nickel above background in stockyard -likely volcanic-derived gravel (153)
522	19	Dwelling, sheds &	Arsenic above residential guideline value on south

Wainui Road		yards	side of open bay shed (151) Zinc above environmental criteria on south side of open bay shed (151) Asbestos-cement fibrolite north of open-bay shed (164) Asbestos-cement fibrolite fencing material (163) Zinc slightly above background south of shed by road Arsenic, copper, lead & zinc above environmental criteria in burning area (156/157) Arsenic and lead above residential & outdoor worker protection guidelines in burning area (156/157)
Lot 8	20	Track ACM	Asbestos-containing material on track surface
602 Wainui Road	21	Dwelling (1980s)	No sampling required
597 Wainui Road	22	Dwelling (1980s)	No sampling required
9 Cemetery Road	23	Dwelling & shed (1970s)	Heavy metals generally within background ranges Copper at one location (107) above environmental criteria No detectable pesticides
	24	Horticulture area 6	Heavy metals within background ranges No detectable pesticides

Aside from the locations set out in Table 13, no heavy metal contamination was present at levels outside of the normal background ranges for the individual metals.

Zinc contamination around the former pump shed location at Lot 12 DP 198205 (Location 1) presents a potential risk to the environment under the proposed residential land use. Remediation of this contamination is required prior to general earthworks.

Contamination in the silage trench area at Lot 12 DP 198205 (Location 2) presents a potential risk to human health (arsenic) and the environment (zinc) under the proposed residential land use. Remediation of this contamination is required prior to general earthworks.

Asbestos-containing material fragments in the demolition stockpile and track at Lot 12 DP 198205 (Location 7) presents a potential risk to human health under the proposed residential land use. Remediation of this contamination is required prior to general earthworks.

Contamination around the former dwelling and shed at 500 Wainui Road (Location 13) presents a potential risk to human health (lead) and the environment (lead and zinc) under the proposed residential land use. Remediation of this contamination is required prior to general earthworks.

Contamination around the former dwelling, sheds, and yards at 522 Wainui Road (Location 19) presents a potential risk to human health (arsenic, lead, and asbestos) and the environment (arsenic, copper, lead, and zinc) under the proposed residential land use. Remediation of this contamination is required prior to general earthworks.

Contamination in one sample location at 9 Cemetery Road (Location 23) presents a potential risk to the environment (copper) under the proposed residential land use. Remediation of this contamination is required prior to general earthworks.

Contamination at levels below the applicable health and environmental protection guidelines does not require remediation. It will however need to be managed during any future redevelopment earthworks. The location of any contamination remaining on site following redevelopment will need to be recorded on property titles and be controlled by a long-term site management plan for contamination.

6.3 Conceptual Site Model

The information gathered for this investigation has been used to revise and expand on the preliminary conceptual site model to aid in determining whether the NES applies to the site and whether contamination remediation or management is required.

The identified contaminants at levels above applicable guidelines are evaluated in the conceptual site model (CSM) shown in Table 14.

Table 14 Conceptual Site Model

Potential Source	Potential Pathways	Potential Receptors	Assessment
Pump Shed in east of Lot 12 DP 198205	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Incomplete: concentration of zinc is below applicable residential and outdoor worker guidelines
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	Incomplete: concentration of zinc is below applicable residential and outdoor worker guidelines
	Inhalation of vapours	Human Health - residential and outdoor worker	Incomplete: zinc contamination does not present a risk of inhalation of vapours
	Surface water run-off	Ecological receptors – public stormwater and Orewa Awa	Complete: concentration of zinc is above applicable guidelines
	Migration of groundwater	Ecological receptors – public stormwater and Orewa Awa	Complete: concentration of zinc is above applicable guidelines
Silage trench in north of Lot 12 DP 198205	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Complete for residential health: concentration of arsenic is above applicable residential guidelines but below outdoor worker guidelines
	Ingestion of	Human Health -	Complete for residential

	contaminated soils	residential and outdoor worker	health: concentration of arsenic is above applicable residential guidelines but below outdoor worker guidelines
	Inhalation of vapours/fibres	Human Health - residential and outdoor worker	Incomplete: arsenic contamination does not present a risk of inhalation of vapours
	Surface water run-off	Ecological receptors – public stormwater and Orewa Awa	Complete: concentration of zinc is above applicable guidelines
	Migration of groundwater	Ecological receptors – public stormwater and Orewa Awa	Complete: concentration of zinc is above applicable guidelines
Demolition stockpile & track surface in north of Lot 12 DP 198205	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Potentially complete: asbestos-cement material may release asbestos fibres
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	Potentially complete: asbestos-cement material may release asbestos fibres
	Inhalation of vapours/fibres	Human Health - residential and outdoor worker	Potentially complete: asbestos-cement material may release asbestos fibres
	Surface water run-off	Ecological receptors – public stormwater and Orewa Awa	Incomplete: concentrations of contaminants are below applicable guidelines
	Migration of groundwater	Ecological receptors – public stormwater and Orewa Awa	Incomplete: concentrations of contaminants are below applicable guidelines
Former dwelling & shed area in north of 500 Wainui Road	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Complete for residential health: concentration of lead is above applicable residential guidelines but below outdoor worker guidelines
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	Complete for residential health: concentration of lead is above applicable residential guidelines but below outdoor worker guidelines

	Inhalation of vapours	Human Health - residential and outdoor worker	Incomplete: lead & zinc contamination does not present a risk of inhalation of vapours
	Surface water run-off	Ecological receptors – public stormwater and Orewa Awa	Complete: concentrations of lead and zinc are above applicable guidelines
	Migration of groundwater	Ecological receptors – public stormwater and Orewa Awa	Complete: concentrations of lead and zinc are above applicable guidelines
Area around dwelling, sheds & yards in southeast of 522 Wainui Road	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Complete for residential health: concentrations of arsenic and lead are above applicable residential and outdoor worker guidelines
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	Complete for residential health: concentrations of arsenic and lead are above applicable residential and outdoor worker guidelines
	Inhalation of vapours	Human Health - residential and outdoor worker	Incomplete: arsenic and lead contamination does not present a risk of inhalation of vapours
	Surface water run-off	Ecological receptors – public stormwater and Orewa Awa	Complete: concentrations of arsenic, copper, lead, & zinc are above applicable guidelines
	Migration of groundwater	Ecological receptors – public stormwater and Orewa Awa	Complete: concentrations of arsenic, copper, lead, & zinc are above applicable guidelines
Pump Shed in east of Lot 12 DP 198205	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Incomplete: concentration of copper is below applicable residential and outdoor worker guidelines
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	Incomplete: concentration of copper is below applicable residential and outdoor worker guidelines
	Inhalation of vapours	Human Health - residential and outdoor worker	Incomplete: copper contamination does not present a risk of inhalation of vapours

	Surface water run-off	Ecological receptors – public stormwater and Orewa Awa	Complete: concentration of copper is above applicable guidelines
	Migration of groundwater	Ecological receptors – public stormwater and Orewa Awa	Complete: concentration of copper is above applicable guidelines

6.3.1 Potential Effects of Contamination

The conceptual site model based on the sampling carried out to date indicates that it is likely that contamination in specific areas of the site will have significant effects on human health or ecological receptors during site redevelopment works or under future residential land use as source, pathway and receptor linkages are complete or potentially complete.

Source, pathway and receptor linkages are incomplete for other parts of the site where contamination is present at levels below applicable guidelines

The presence of identified contamination on site implies that the NES will apply to the proposed redevelopment.

Concentrations of soluble contaminants in overland stormwater at the site boundary, surface water within the site, or groundwater at the site boundary have not been measured as part of this DSI. Reasons for this include:

- Locations where contaminants were measured at levels above the permitted activity criteria cover approximately 0.2 hectares out of the total site area of approximately 231 hectares.
- The identified areas of contamination that exceeds the permitted activity criteria are currently undisturbed, and generally in an erosion-resistant state.
- The contamination is generally located in shallow soil above the local groundwater level.

On this basis, it is highly unlikely that discharges from the land are currently causing significant adverse effects on the environment.

Specific controls will be put in place during any future disturbance of the contaminated materials to ensure that there are no adverse effects on the environment.

7 Summary

This investigation was carried out on behalf of FHLD to determine whether any potentially hazardous activities had occurred on, or around, the site that could have resulted in contamination of the ground within the site, and to evaluate the degree of any resulting contamination.

It is proposed that properties within the site will be redeveloped for generally residential use.

A 2023 PSI that included the site identified potential contamination issues at several properties, including:

- Previous horticultural land use and associated agri-chemical use, storage, and disposal.
- Use/disposal of asbestos-containing materials in and around buildings.
- Fill or rubbish areas.
- Use of lead-based paints on current or former buildings.

A prior assessment of 522 Wainui Road identified the presence of asbestos-containing materials at several locations around the buildings in the southeast of the property. The potential for contamination with heavy metals and PAHs was also identified.

Previous assessments of 480 Wainui Road, 9 Cemetery Road, Lot 4 DP 353309, and part of 36 Sidwell Road did not find any contamination of the ground.

A review of aerial photographs identified specific areas across the site that required further investigation and these were included in the walkover inspection, which identified actual or potential contamination issues on several of the individual properties. There were no visible issues identified at the remaining properties, or in the surrounding area that would be likely to have resulted in contamination of the ground within the site.

Actual or possible HAIL activities identified across the site included:

- Potential for livestock dip or spray race operations.
- Potential for persistent pesticide bulk storage or use.
- Potential for storage tanks or drums for fuel, chemicals or liquid-based (possible farm fuel storage).
- Asbestos products manufacture or disposal (ACM in tracks, a fence, and buildings).
- Landfill sites (farm rubbish burial).
- Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment (rubbish/waste burning).

A preliminary conceptual site model identified that source, pathway, receptor linkages were potentially complete, and that assessment of the presence of contamination within areas of HAIL activities was required.

Groundwater and Environmental Services

Intrusive investigation and sampling targeting areas of potential contamination was carried out on 1, 4, 6, and 8 March 2026. No soil sampling was undertaken on the properties north of Orewa Awa, which are intended to be used for recreational purposes only.

Soil contamination at levels above or below relevant guidelines for health and/or environmental protection was detected in samples from parts of:

- Lot 12 DP 198205
- 500 Wainui Road
- 522 Wainui Road
- Lot 8 DP 198205
- 9 Cemetery Road

No soil contamination was detected at the other sampled properties. Sampling was not undertaken around the dwelling and shed in the southeast of 500 Wainui Road. Sampling in this area is recommended prior to demolition or earthworks.

The presence of asbestos-containing material was confirmed at the following properties:

- Lot 12 DP 198205
- 522 Wainui Road
- Lot 8 DP 198205

Asbestos-containing materials were found in isolated areas on site however no asbestos contamination has been detected in soil samples collected to date.

The conceptual site model based on the sampling carried out to date indicates that it is likely that potential contamination in specific areas of the site will have significant effects on human health or ecological receptors as the source, pathway and receptor linkages are complete or potentially complete. Source, pathway and receptor linkages are incomplete for other parts of the site where contamination is present at levels below applicable guidelines or where no contamination was detected.

Given the presence of identified contamination on site, the NES will apply to any proposed redevelopment. Consent will also be required under the contaminated land provisions of the Auckland Regional Plan.

As with any assessment of this nature, there is always the possibility that additional items not visible during the investigation may be revealed during subsequent investigations or during redevelopment of the site. Any such items should be evaluated by a suitably qualified environmental consultant in accordance with the requirements of Auckland Council.

7.1 Recommendations

Based on the assessment undertaken for this report, the following recommendations are made to avoid, remedy or mitigate potential adverse effects associated with the proposal and to support the appropriate implementation of the development:

1. Prepare a site management and remedial action plan (SMP/RAP) plan that details the actions to be taken prior to or during site works to avoid, remedy or mitigate any adverse effects on human health or the environment.

2. Obtain consent under the NES and the contaminated land provisions of the Auckland Unitary Plan. This DSI and the SMP/RAP will be submitted to Auckland Council along with the consent applications and will form the basis for contamination management and remediation at the site.
3. Carry out additional soil sampling around areas of identified contamination, where necessary, to confirm the extent of contamination prior to commencing any remediation or other site works.
4. Remediate contamination at levels above the NES residential or outdoor worker protection guideline levels, and/or the permitted activity criteria for environmental protection. Remediation of asbestos-containing materials is also recommended. Identified contamination requiring remediation includes:
 - Zinc around the former pump shed location at Lot 12 DP 198205 (Location 1).
 - Arsenic and Zinc in the silage trench area at Lot 12 DP 198205 (Location 2).
 - ACM fragments in the demolition stockpile and track at Lot 12 DP 198205 (Location 7).
 - Lead and zinc around the former dwelling and shed at 500 Wainui Road (Location 13).
 - Arsenic, copper, lead, zinc, and asbestos around the former dwelling, sheds, and yards at 522 Wainui Road (Location 19).
 - Copper in one sample location at 9 Cemetery Road (Location 23).
5. Manage contamination at levels below the NES residential or outdoor worker protection guideline levels, and/or the permitted activity criteria for environmental protection. Contaminated material left on site will require appropriate long-term management and will be recorded on affected property titles.

7.2 Consent Requirements

The assessment undertaken for this DSI has determined that there is contamination in parts of the site. Contamination levels at some locations exceed:

- Applicable NES guidelines for the protection of human health.
- The permitted activity criteria for environmental protection specified in the AUP.

Consents for the management or remediation of contamination at the site are therefore required under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES), and the contaminated land provisions of the Auckland Unitary Plan (AUP).

The required consents include:

- Restricted Discretionary activity consent under regulation 10 of the NES.
- Controlled activity consent under the contaminated land provisions of the Auckland Unitary Plan.

7.3 Conclusions

The assessment undertaken in this report, has identified isolated areas contamination resulting from past land use practices.

The areas where contaminants were measured at levels above the applicable NES guideline values and/or the permitted activity criteria cover approximately 0.2 hectares out of the total site area of approximately 231 hectares. Remediation will be required for these areas as part of any site redevelopment.

The areas where contaminants were measured at levels below the applicable NES guideline values and/or the permitted activity criteria cover approximately 1.9 hectares out of the total site area of approximately 231 hectares. Management will be required for these areas as part of any site redevelopment.

This report has provided recommendations for the further assessment and remediation/management of contamination to control potential risks to human health and the environment.

As with any assessment of this nature, there is always the possibility that additional items not visible during the investigation may be revealed during subsequent investigations or during redevelopment of the site. Any such items should be evaluated by a suitably qualified environmental consultant in accordance with the requirements of Auckland Council.

8 PSI Certifying Statement

I **Andrew James MacDonald** of Groundwater and Environmental Services certify that:

This detailed site investigation report meets the requirements of the Resource Management (National Environmental Standard for assessing and managing contaminants in soil to protect human health) Regulations 2011 because it has been:

- Carried out by a suitably qualified and experienced practitioner;
- Reported on in accordance with the current edition of Contaminant Land Management Guidelines No 1 – Reporting on Contaminated Sites in New Zealand (June 2021); and
- Certified by a suitably qualified and experienced practitioner.

Evidence of the qualifications and experience of the suitably qualified and experienced practitioner who has carried out this investigation and has certified this report is appended to this report in Appendix G.

Signed and dated:



30 June 2026

**DISCLAIMER:**

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Lot 12 DP 198205 Wainui Road

0 10 20 30
Meters

Scale @ A4
= 1:2,500

Date Printed:
14/02/2026



DISCLAIMER:

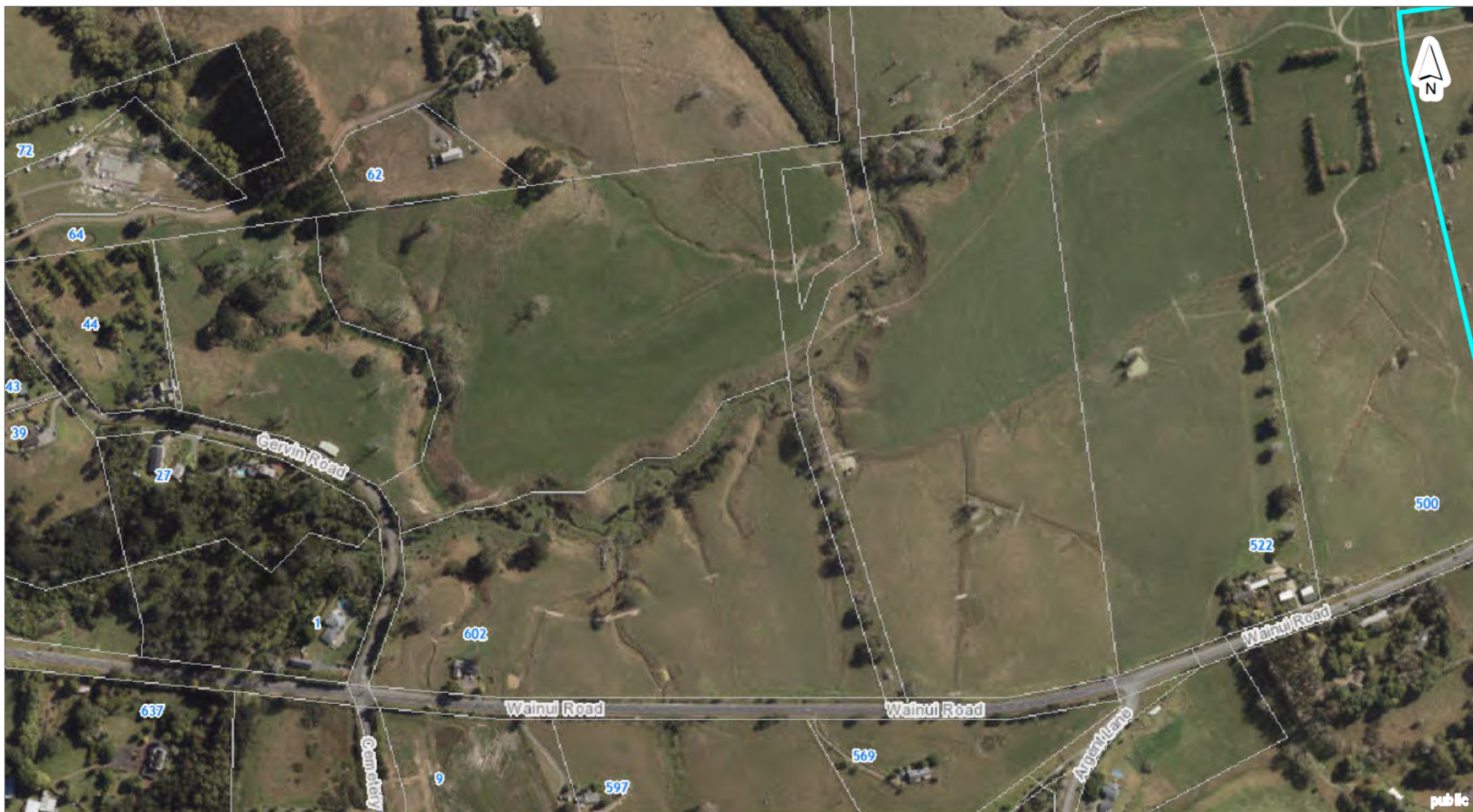
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500-522 Wainui Road

0 25 50 75
Meters

Scale @ A4
= 1:5,000

Date Printed:
14/02/2026



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0 30 60 90
Meters

Scale @ A4
= 1:5,000

Date Printed:
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0 10 20 30
Meters

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Lot 12 DP 198205 Wainui Road

0 10 20 30
Meters

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14/02/2026

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480 Wainui Road

0 10 20 30
Meters

Scale @ A4
= 1:2,500

Date Printed:
14/02/2026



500-522 Wainui Road

Date Printed:
14/02/2026



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Lot 8 DP 198205, Wainui Road

0 10 20 30
Meters

Scale @ A4
= 1:2,500

Date Printed:
14/02/2026



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602 Wainui Road

0 10 20 30
Meters

Scale @ A4
= 1:2,500

Date Printed:
14/02/2026







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0 10 20 30
Meters

Scale @ A4
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Lot 12 DP 198205 Wainui Road

0 10 20 30
Meters

Scale @ A4
= 1:2,500

Date Printed:
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500-522 Wainui Road

Date Printed:
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Date Printed:
18/02/2026



Auckland Council
Te Kaitiaki o Tāmaki Makaurau

Appendix A
Aerial Photo Review & Walkover Inspection Results

Summary of Aerial Photograph Observations

Location	Aerial Observations
	602 Wainui Road
41	Dwelling in southwest – 1970s
42	Stream crossings
43	Earthworks by streams near south boundary (ponds) – 1950s
	9 Cemetery Road
51	Drainage earthworks at south end of property – 1950s
52	Pond by east boundary – 1960s
53	Dwelling in northwest corner – 1970s. Removed by 2024
54	Disturbed ground west of pond – 1980s
55	Shed and horticulture area along western side of property – 1990s. Shed removed by 2024
56	Pond in southwest and north 1990s Pond in southwest enlarged in 2010
57	Shed SE of dwelling 2017. Removed by 2024
58	Disturbed ground (late 2000s). Pond – 2010
	597 Wainui Road
124	Silage trench by north boundary - 1950s
49	Dwelling by west boundary in north – 1980s
50	Pond southeast of dwelling - 2000
	569 Wainui Road
125	Track across property (replaced by new road alignment?) – 1940s
126	Pond & adjacent soil pile – 1950s
127	Dwelling with driveway from NW corner of property – 1980s. Removed by 2024
	Lot 8 DP 198205
37	Stream crossing in NW 1940s
38	Pond in southern half of property – 1990s
39	Stream crossing by W boundary 1950s
40	Pond by west boundary – 2024
113	Track west of stream crossing – 1950s
	522 Wainui Road
33	Dwelling & sheds in southeast by road – 1950s
34	Stream crossing – 1950s
35	Yards along E boundary in south – 1990s
36	Pond in middle of property 1990s
122	Additional sheds to ENE of dwelling 1970s
123	Disturbed ground north of sheds 1980s
	500 Wainui Road
25	Possible horticulture area – 1940s to 1950s
26	Disturbed ground at south of possible horticulture area – 1940
27	Dwelling in NE – 1940s Replaced by shed - 1960s. Removed between 2022 & 2024
28	Shed in NE – 1940. Removed between 2022-2024

Groundwater and Environmental Services

29	Dwelling in south-east corner - 1950s
30	Possible horticulture/yard south-east of original dwelling/shed – 1960s/70s
31	Horticulture area in north of property– 1980s
32	Fill/pond area – 1990s/2000s
111	Stockpile - 2024
112	Stockyards – 1960s
	480 Wainui Road
18	Sheds (x2) – 1940s (removed by 1950s) – SE corner and mid property
19	Pond (S of 18) – 1960s
20	Shed in NE corner – 1960s
21	Horticulture Area – 1970s north of stream tributary (and north-east corner)
22	Disturbed ground south of shed and track – 1970s
23	Dwelling in SE– 1980s. Removed by 2024
24	Disturbed ground in south of former horticulture area – 2006
	Lot 12 DP 198205
12	Shed & Yard near west boundary in north- 1940
13	Possible rubbish dumping area between gullies in NW of property - 80s-90s
14	Former silage pit/trench in NE corner – 1950s
15	Horticulture areas – 1960s to 1980s
16	Pond in south-east corner 2000
17	Disturbed ground – possible fill – 2024
101	Groundwater pump shed
102	Stream bank fill area – east bank
103	Gate to stream crossing
104	South of stream crossing
105	West of stream
106	Southwest corner of property
107	Gate/crossing by west boundary
108	Pond in northwest of property
109	Gully north (upstream) of pond
110	Stream crossing & stockpile

Groundwater and Environmental Services

Location	Aerial Observations	Walkover Observations
Lot 12 DP 198205		
12	Shed & Yard near west boundary in north- 1940	Water tank with some concrete on the ground surface to the south-east. Raised area of former building 
13	Possible rubbish dumping area between gullies in NW of property - 80s-90s	No visible evidence of rubbish dumping
14	Former silage pit/trench in NE corner - 1950s	Farm and household rubbish dumping on the east side and base of the trench. Materials include steel, concrete, glass, car parts, wheels and general household refuse. 
15	Horticulture areas - 1960s to 1980s	No visible evidence of former horticulture
16	Pond in south-east corner 2000	Man-made pond with discharge towards swampy ground to south. Two soil/clay stockpiles of material excavated from the pond.
17	Disturbed ground - possible fill - 2024	Soil pile of material excavated from pond.

Groundwater and Environmental Services

101	Groundwater pump shed	Remaining concrete foundations and possible bore under PVC cap. Broken concrete and pressure tank on the surrounding ground. 
102	Stream bank fill area – east bank	Steel cladding and rubbish. Intermittent rubbish buried and exposed over approximately 25 m (starts 10 m from northern fence).  

Groundwater and Environmental Services

103	Gate to stream crossing	Gravel over steel pipe.
104	South of stream crossing	Rusted steel pipe and fence posts in small soil pile. 
105	West of stream	Four rusted gas tanks in top of stream edge. 
106	Southwest corner of property	Vegetation burning pile
107	Gate/crossing by west boundary	Gravel over plastic pipe
108	Pond in northwest of property	Small manmade pond. No visible potential contamination
109	Gully north (upstream) of pond	Household/farm rubbish dumping area - steel, battery, household items, rusted drum. 5 x 5 m on the surface – possibly extends underground.

Groundwater and Environmental Services

		
110	Stream crossing & stockpile	Demolition material in a small stockpile above the stream and in the stream crossing. Material includes ACM sheet pieces, concrete, brick, and gravel. ACM in stream crossing Sample 001 (ACM sheet pieces) – Asbestos detected  
480 Wainui Road		
18	Sheds (x2) – 1940s (removed by 1950s) – SE corner	No visible signs of former sheds

Groundwater and Environmental Services

	and mid property	
19	Pond (S of 18) - 1960s	No indications of potential contamination
20	Shed in NE corner - 1960s	No visible signs of former shed
21	Horticulture Area - 1970s north of stream tributary (and north-east corner)	No visible evidence of former horticulture
22	Disturbed ground south of shed and track - 1970s	No visible indications of potential contamination. Disturbed ground likely associated with track work
23	Dwelling in SE- 1980s Removed by 2024	No visible indications of potential contamination or demolition material in former dwelling location.
24	Disturbed ground in south of former horticulture area - 2006	No indications of potential contamination
500 Wainui Road		
25	Possible horticulture area - 1940s to 1950s	No visible evidence of former horticulture or potential contamination
26	Disturbed ground at south of possible horticulture area - 1940	No indications of potential contamination
27	Dwelling in NE - 1940s Replaced by shed - 1960s Removed between 2022 & 2024	Shipping container on larger concrete slab in former dwelling & shed area. Some gravel in surrounding ground. 
28	Shed in NE - 1940 Removed between 2022-2024	Silage storage area. No evidence of previous shed or potential contamination.
29	Dwelling in south-east corner - 1950s	Dwelling with galvanised iron shed/garage. ACM planter on lawn to south of dwelling.

Groundwater and Environmental Services

		
30	Possible horticulture/yard south-east of original dwelling/shed – 1960s/70s	Fenced paddock with possible groundwater bore site at the western end. No indications of former horticulture
31	Horticulture area in north of property– 1980s	No visible evidence of former horticulture or potential contamination
32	Fill/pond area – 1990s/2000s	Man-made pond with earth walls.
111	Stockpile - 2024	Rock pile with soil, gravel, concrete, and brick. No visible contamination 
112	Stockyards – 1960s	Stockyards. No visible contamination.
522 Wainui Road		
33	Dwelling & sheds in southeast by road – 1950s	Asbestos-cement products visible on dwelling
34	Stream crossing – 1950s	No visible potential contamination
35	Yards along E boundary in south – 1990s	Compacted gravel in yards. No visible potential contamination

Groundwater and Environmental Services

36	Pond in middle of property 1990s	No visible potential contamination
122	Additional sheds to ENE of dwelling 1970s	Isolated ACM sheet pieces on ground surface north of open-bay shed ACM sheets by fence to east of sheds and driveway/track. 
123	Disturbed ground north of sheds 1980s	Evidence for rubbish burning in this area
Lot 8 DP 198205		
37	Stream crossing in NW 1940s	Concrete and other demolition material in crossing surface. ACM sheet pieces in track west of crossing (see item 113) 
38	Pond in southern half of property – 1990s	No visible potential contamination
39	Stream crossing by W boundary 1950s	No visible potential contamination
40	Pond by west boundary – 2024	No visible potential contamination
113	Track west of stream crossing – 1950s	Isolated and dispersed ACM sheet pieces (x 10) on track surface. Noted over 8 m of track, starting approximately 8 m from edge of stream.

Groundwater and Environmental Services

		Sample 002 (ACM sheet pieces) – Asbestos detected 
602 Wainui Road		
41	Dwelling in southwest – 1970s	Single level block dwelling 
42	Stream crossings	Stream crossings with plastic drainage pipe. Stream crossing in middle of property - Minor steel, pipe, concrete, and gravel in the crossing
43	Earthworks by streams near south boundary (ponds) – 1950s	No visible indications of potential contamination
9 Cemetery Road		
51	Drainage earthworks at south end of property – 1950s	No visible indications of potential contamination
52	Pond by east boundary – 1960s	No visible indications of potential contamination
53	Dwelling in northwest corner – 1970s Removed by 2024	No visible indications of potential contamination
54	Disturbed ground west of pond –	No visible indications of potential contamination

Groundwater and Environmental Services

	1980s	
55	Shed and horticulture area along western side of property – 1990s Shed removed by 2024	No visible indications of potential contamination
56	Pond in southwest and north 1990s Pond in southwest enlarged in 2010	No visible indications of potential contamination
57	Shed SE of dwelling 2017 Shed removed by 2024	No visible indications of potential contamination 
58	Disturbed ground (late 2000s). Pond – 2010	No visible indications of potential contamination
597 Wainui Road		
124	Silage trench by north boundary - 1950s	No visible indications of potential contamination
49	Dwelling by west boundary in north – 1980s	No visible indications of potential contamination 
50	Pond southeast of dwelling - 2000	No visible indications of potential contamination
569 Wainui Road		
125	Track across	No visible indications of potential contamination

Groundwater and Environmental Services

	property (replaced by new road alignment?) – 1940s	
126	Pond & adjacent soil pile – 1950s	No visible indications of potential contamination
127	Dwelling with driveway from NW corner of property – 1980s Removed by 2024	No visible indications of potential contamination

Appendix B

Sample Descriptions

Groundwater and Environmental Services

Location	Sample Number	Depth Range m	Description
15 February 2026			
Lot 12	MN26001	-	Asbestos-cement sheet pieces
Lot 8	MN26002	-	Asbestos-cement sheet pieces
1 March 2026			
#8	MN26007	0-0.15	Medium greyish brown loose silty soil with minor gravel
	MN26008	0.15-0.3	7 cm of medium greyish brown loose silty soil over medium orange silt
	MN26009	0-0.15	North side of building footprint Medium brown to slightly orange brown loose silty soil
	MN26010	0.15-0.3	Medium orange silt with rare gravel
	MN26011	0-0.15	Light to medium brown loose silty soil
	MN26012	0.15-0.3	Light to medium orange loose silt to 0.25 m with very weakly clayey silt below
	MN26013	0-0.15	Medium to dark grey silty soil. Becomes weakly clayey at depth
	MN26014	0.15-0.3	Mix of light and medium (occasionally dark) grey silt
	MN26015	0-0.15	Centre Light to medium grey loose silt
	MN26016	0.15-0.3	Medium orange brown loose silt
	MN26017	0-0.15	Yard east of building footprint Light brown loose silty soil
	MN26018	0.15-0.3	Light brown to slightly orange brown silt
#4	MN26019	0-0.15	North end of rubbish in gully Rust stained soil to 5 cm over medium greyish brown silty soil
	MN26020	0-0.15	Duplicate of 019
	MN26021	0.15-0.3	Medium grey silt over light grey silt with dark grey towards the base
#7	MN26024	0-0.15	Samples for asbestos and metal analysis Medium brown silty soil with gravel and concrete fragments. ACM sheet pieces on stockpile surface
#6	MN26025	0.15-0.3	30 m south of South edge of house lot platform Light medium brown loose silty soil
	MN26026	0-0.15	Light to medium greyish brown silt becoming very weakly clayey with depth
	MN26027	0.15-0.3	Medium brown to greyish brown silty soil
	MN26028	0-0.15	Medium brown to greyish brown very weakly clayey silt
	MN26029	0.15-0.3	Medium brown silty soil with occasional gum

Groundwater and Environmental Services

			fragments towards the base
	MN26030	0-0.15	Medium greyish brown silt
	MN26031	0.15-0.3	Medium brown silty soil with occasional gum fragments
	MN26032	0.15-0.3	Duplicate 031
	MN26033	0-0.15	Medium brown silty soil with dark grey streaks. Becomes medium brown below 0.25 m
	MN26034	0.15-0.3	Medium brown silty soil with gum fragments
	MN26035	0-0.15	Light to medium greyish brown silt
	MN26036	0.15-0.3	Medium brown silty soil
	MN26037	0-0.15	Light to medium grey silt with weak clay at the base
#5	MN26038	0.15-0.3	North end of area #5 medium brown silty soil
	MN26039	0-0.15	Light medium greyish brown silt
	MN26040	0.15-0.3	Medium brown loose silty soil
	MN26041	0-0.15	Light brown weakly clayey silt
	MN26042	0.15-0.3	Medium to dark brown loose silty soil
	MN26043	0-0.15	Medium brown silt with some very weakly clayey silt towards the base
	MN26044	0-0.15	Medium brown loose silty soil with rare gravel
	MN26045	0-0.15	Duplicate of 044
	MN26046	0.15-0.3	Medium brown loose silty soil
	MN26047	0-0.15	Medium brown loose silty soil
	MN26048	0.15-0.3	Medium brown loose silty soil
	MN26049	0-0.15	Medium brown loose silty soil with rare gravel
	MN26050	0.15-0.3	Medium brown loose silty soil with very light grey to white silt at the base
	MN26051	0-0.15	Medium brown loose silty soil
	MN26052	0.15-0.3	Medium brown loose silty soil with light grey to white silt towards base
	MN26053	0-0.15	Medium brown loose silty soil
	MN26054	0.15-0.3	Medium brown loose silty soil with flecks of light grey to white silt
	MN26055	0-0.15	Medium brown loose silty soil with rare gum fragments
	MN26056	0.15-0.3	Medium brown loose silty soil
	MN26057	0.15-0.3	Duplicate 056
	MN26058	0-0.15	Medium brown loose silty soil
	MN26059	0.15-0.3	Medium brown loose silty soil
#16	MN26060	0-0.15	12 m from tract corner – adjacent to silage bales Medium brown silty soil with rare gravel
	MN26061	0.15-0.3	Light to medium brown to grey weakly clayey silt
#14	MN26062	0-0.15	Medium greyish brown silty soil
	MN26063	0.15-0.3	Medium grey weakly clayey silt
#13	MN26064	0-0.15	West side of area #13 Medium brown silt with occasional gravel and

Groundwater and Environmental Services

			orange silt
	MN26065	0.15-0.3	Light medium brown silt
	MN26066	0-0.15	North side of area #13 Medium brown silty soil and gravel
	MN26067	0.15-0.3	Medium brown silty soil and gravel with occasional black patches
4 March 2026			
#9	MN26068	0-0.15	Medium brown very weakly clayey silty soil
	MN26069	0.15-0.3	Medium brown very weakly clayey silty soil
	MN26070	0-0.15	Medium brown loose silty soil with rare light brown silt
	MN26071	0.15-0.3	Medium brown loose silty soil with rare light brown silt
	MN26072	0-0.15	Medium brown loose silty soil
	MN26073	0.15-0.3	Medium brown silty to very weakly clayey soil with occasional gum fragments
	MN26074	0-0.15	Medium brown silty soil with light brown silt at base
	MN26075	0.15-0.3	Mix of light and medium brown silt with occasional gum fragments
	MN26076	0-0.15	Medium brown to slightly reddish brown silty soil
	MN26077	0.15-0.3	Medium brown to slightly reddish brown silty soil
	MN26078	0.15-0.3	Duplicate 077
#12	MN26079	0-0.15	Medium brown silty soil
	MN26080	0.15-0.3	Medium brown silty soil
	MN26081	0-0.15	Medium brown silty soil with rare gum fragments
	MN26082	0.15-0.3	Medium brown silty soil with minor light brown and dark grey patches
	MN26083	0-0.15	Medium brown silty soil
	MN26084	0.15-0.3	Medium brown silty soil with minor light grey silt and rare gum fragments
	MN26085	0-0.15	Medium brown silty soil
	MN26086	0.15-0.3	Medium brown silty soil with dark brown patches towards base
	MN26087	0-0.15	Medium brown silty soil
	MN26088	0-0.15	Duplicate of the 087
	MN26089	0.15-0.3	Medium brown silty soil with dark brown patches towards base
	MN26090	0-0.15	Medium brown silty soil
	MN26091	0.15-0.3	Medium brown silty soil
	MN26092	0-0.15	5 m from trough Medium brown silty soil
	MN26093	0.15-0.3	Medium brown silty soil
	MN26094	0-0.15	Medium brown silty soil
	MN26095	0.15-0.3	Mix of medium brown silty soil and black silty soil to silt

Groundwater and Environmental Services

	MN26096	0-0.15	Medium brown silty soil
	MN26097	0.15-0.3	Medium brown silty soil with occasional black patches
6 March 2026			
#23	MN26098	0-0.15	Medium brown silty soil with occasional gravel. Medium orange silt to clayey silt at the base
	MN26099	0.15-0.3	Medium orange silty clay
			Composite for asbestos analysis of 098 and 101
	MN26101	0-0.15	Medium brown silt with minor sand and gravel and medium orange silty clay
	MN26102	0.15-0.3	Medium orange silty clay with patches of medium brown to medium orange silt
			Composite for asbestos analysis of 099 and 102
	MN26104	0-0.15	Light brown silt with minor gravel. Patches of light to medium orange silty clay
	MN26105	0.15-0.3	Light medium orange silty clay
			Composite for asbestos analysis of 104 and 107
	MN26107	0-0.15	Medium brown silt with common gravel and occasional orange silty clay
	MN26108	0.15-0.3	Medium orange silty clay with some light orange and reddish patches
			Composite for asbestos analysis of 105 and 108
	MN26110	0-0.15	Medium brown silty soil with patches of light medium orange clayey silt
	MN26111	0-0.15	Duplicate of 110
	MN26112	0.15-0.3	Light medium orange clayey silt to silty clay
#24			
	MN26114	0-0.15	Medium brown silty soil with medium orange silty clay at the base
	MN26115	0.15-0.3	Light medium orange silty clay to clayey silt
	MN26116	0-0.15	Medium brown silt with common gravel. Medium orange to reddish orange clayey silt at base
	MN26117	0.15-0.3	Medium orange clayey silt with reddish patches
	MN26118	0-0.15	Common gravel with medium brown silt and minor orange brown silt
	MN26119	0.15-0.3	Light medium orange brown weakly clayey silt with minor light brown silt
	MN26120	0-0.15	10 cm of light brown silt over light orange weakly clayey silt
	MN26121	0.15-0.3	Light orange to light brown clayey silt
	MN26122	0-0.15	Light medium brown silt with some weak clay. Medium orange to reddish silt at base
	MN26123	0-0.15	Duplicate of 122
	MN26124	0.15-0.3	Light to medium reddish orange clayey silt
	MN26125	0-0.15	Light to medium brown silt with some light brown silt towards the base

Groundwater and Environmental Services

	MN26126	0.15-0.3	Light brown to medium orange weakly clayey silt
	MN26127	0-0.15	Light medium brown silty soil with occasional limonite patches
	MN26128	0.15-0.3	Medium brown mottled (limonite) silt
	MN26129	0-0.15	Medium brown silty soil with medium brown to orange clayey silt towards the base
	MN26130	0.15-0.3	Medium brown to occasionally medium orange silt
	MN26131	0-0.15	Medium brown silty soil with orange brown weakly clayey silt at the base
	MN26132	0.15-0.3	Medium brown silt
8 March 2026			
#2	MN26133	0-0.15	Silage Pit on Lot 12 North end of Pit base – near area of metal waste Medium brown silty soil over light to medium brown silt. Light orange silt towards base
	MN26134	0.15-0.3	Very light brown to light orange silt (occasionally mottled)
	MN26135	0-0.15	East wall of pit – approximately halfway along and halfway up the wall Dark grey to black silt with occasional gravel. Patches of reddish orange silt
	MN26136	0.15-0.6	Dark grey to black silt with occasional gravel over 5 cm of light brown silt
#1	MN26137	0-0.15	Former pump shed location – North side – 10 cm north of foundation Medium brown loose silty soil
	MN26138	0.15-0.3	Medium brown loose silty soil with some light brown silt towards the base
#15	MN26139	0-0.1	Stockyard Medium brown loose fine silt and gravel
#13	MN26140	0-0.15	East side of the former dwelling/house Lot. 4 m west of wooden fence and close to concrete path Medium brown silty soil with rare gravel and won rusted piece of metal. Light grey silt at base
	MN26141	0.15-0.3	Light grey silt with some medium brown silt below 25 cm
	MN26142	0-0.15	South of concrete pad - 1.5 m west of wooden gate medium brown loose silty soil with minor lime chip gravel
	MN26143	0-0.15	Duplicate of 142
	MN26144	0.15-0.3	Medium brown to light grey silt
#10	MN26145	0-0.15	North of the bund Light brown loose silty soil
	MN26146	0.15-0.3	5 cm of light brown loose silty soil over light to medium orange silt
#19	MN26147	0-0.15	South side of dwelling – east of porch

Groundwater and Environmental Services

			Dark brown silty soil over 5 cm of medium grey silt
MN26148	0.15-0.3		Medium orange silty clay
MN26149	0-0.15		West side of dwelling – 30 cm west of building edge light brown loose silty soil
MN26150	0.15-0.3		Light brown loose silty soil and silt
MN26151	0-0.15		South side of open bay corrugated iron shed dark brown silty soil over light grey clayey silt
MN26152	0.15-0.3		Light brown to medium orange clayey silt to silty clay
MN26153	0-0.12		Middle of large yard – refusal at 12 cm medium brown silt and gravel
MN26154	0-0.08		Middle of small yard refusal at 8 cm medium brown silt and gravel
MN26155	0-0.1		70 cm south of large shed by Road – refusal at 10 cm Medium brown silt and gravel
MN26156	0-0.15		Former rubbish burning area north of the buildings and yards Medium to dark grey silt/ash with pieces of glass, plastic and nails
MN26157	0-0.15		Duplicate 156
MN26158	0.15-0.3		Light greyish brown silt
MN26159	0-0.15		Ground adjacent to area of ACM sheets Medium brown loose silty soil
MN26160	0-0.15		Track south of open bay shed Medium grey silt, gravel and concrete
MN26161	0.15-0.3		Medium orange plastic clay
MN26162	-		ACM sheet fragment from adjacent to sample 159
MN26163	-		ACM sheet fragment from the track in the area of samples 160/161

Appendix C

Laboratory Analytical Reports



Certificate of Analysis

Page 1 of 2

Client:	Groundwater & Environmental Services	Lab No:	4105628	A2Pv1
Contact:	Mr A MacDonald C/- Groundwater & Environmental Services PO Box 190 Cambridge 3450	Date Received:	19-Feb-2026	
		Date Reported:	24-Feb-2026	
		Quote No:	82855	
		Order No:		
		Client Reference:	Milldale North	
		Submitted By:	Mr A MacDonald	

Sample Type: Building Material

Sample Name	Lab Number	Sample Category*	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
MN26001 16-Feb-2026	4105628.1	Cement Product	35.11	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	N/A
MN26002 16-Feb-2026	4105628.2	Cement Product	19.41	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	N/A
MN26003 16-Feb-2026	4105628.3	Cement Product	55.27	Asbestos NOT detected. Organic fibres detected.	N/A
MN26004 16-Feb-2026	4105628.4	Cement Product	42.17	Asbestos NOT detected. Organic fibres detected.	N/A
MN26005 16-Feb-2026	4105628.5	Cement Product	26.78	Asbestos NOT detected. Organic fibres detected.	N/A
MN26006 16-Feb-2026	4105628.6	Cement Product	23.43	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected. Crocidolite (Blue Asbestos) detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
 - Trace - Trace levels of asbestos, as defined by AS4964-2004.
- For further details, please contact the Asbestos Team.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Building Material			
Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category*	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	-	1-6
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	0.01 g	1-6
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-6
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1-6



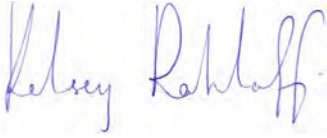
This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 23-Feb-2026 and 24-Feb-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

A handwritten signature in blue ink, reading "Kelsey Rohloff". The signature is written in a cursive style with a horizontal line underneath the name.

Kelsey Rohloff BSc
Laboratory Technician - Asbestos



Certificate of Analysis

Page 1 of 32

Client:	Groundwater & Environmental Services	Lab No:	4115941	SPV1
Contact:	Mr A MacDonald	Date Received:	02-Mar-2026	
	C/- Groundwater & Environmental Services	Date Reported:	10-Mar-2026	
	PO Box 190	Quote No:	82855	
	Cambridge 3450	Order No:		
		Client Reference:	MILLDALE NORTH	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil						
Sample Name:		MN26007	MN26008	MN26009	MN26010	MN26011
		01-Mar-2026	01-Mar-2026	01-Mar-2026	01-Mar-2026	01-Mar-2026
Lab Number:		4115941.1	4115941.2	4115941.3	4115941.4	4115941.5
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	3	< 2	3	< 2	2
Total Recoverable Cadmium	mg/kg dry wt	0.38	0.10	0.34	0.15	0.47
Total Recoverable Chromium	mg/kg dry wt	22	7	18	35	16
Total Recoverable Copper	mg/kg dry wt	12	5	12	6	9
Total Recoverable Lead	mg/kg dry wt	47	11.6	30	14.1	23
Total Recoverable Nickel	mg/kg dry wt	52	14	33	69	36
Total Recoverable Zinc	mg/kg dry wt	300	53	390	132	171
Sample Name:		MN26012	MN26013	MN26014	MN26015	MN26016
		01-Mar-2026	01-Mar-2026	01-Mar-2026	01-Mar-2026	01-Mar-2026
Lab Number:		4115941.6	4115941.7	4115941.8	4115941.9	4115941.10
Individual Tests						
Dry Matter	g/100g as rcvd	-	-	-	86	79
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.12	1.41	0.14	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	7	36	5	< 2	6
Total Recoverable Copper	mg/kg dry wt	3	14	3	< 2	< 2
Total Recoverable Lead	mg/kg dry wt	8.6	22	4.4	2.4	5.9
Total Recoverable Nickel	mg/kg dry wt	7	78	12	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	27	152	18	< 4	< 4
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Alachlor	mg/kg dry wt	-	-	-	< 0.006	< 0.006
Aldrin	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Atrazine	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Atrazine-desethyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Atrazine-desisopropyl	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Azaconazole	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Azinphos-methyl	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Benalaxyl	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Bendiocarb	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Benodanil	mg/kg dry wt	-	-	-	< 0.016	< 0.017
alpha-BHC	mg/kg dry wt	-	-	-	< 0.012	< 0.013
beta-BHC	mg/kg dry wt	-	-	-	< 0.012	< 0.013
delta-BHC	mg/kg dry wt	-	-	-	< 0.012	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Bifenthrin	mg/kg dry wt	-	-	-	< 0.004	< 0.005



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Sample Type: Soil						
Sample Name:		MN26012 01-Mar-2026	MN26013 01-Mar-2026	MN26014 01-Mar-2026	MN26015 01-Mar-2026	MN26016 01-Mar-2026
Lab Number:		4115941.6	4115941.7	4115941.8	4115941.9	4115941.10
Multiresidue Pesticides in Soil samples by GCMS						
Bitertanol	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Bromacil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Bromophos-ethyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Bromopropylate	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Bupirimate	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Buprofezin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Butachlor	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Captafol	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Captan	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Carbaryl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Carbofenothion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Carbofuran	mg/kg dry wt	-	-	-	< 0.008	< 0.009
cis-Chlordane	mg/kg dry wt	-	-	-	< 0.012	< 0.013
trans-Chlordane	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Chlorfenvinphos	mg/kg dry wt	-	-	-	< 0.012	< 0.012
Chlorfluazuron	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Chlorothalonil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Chlorpropham	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Chlorpyrifos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Chlorpyrifos-methyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Chlortoluron	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Chlozolate	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Coumaphos	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Cyanazine	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Cyfluthrin	mg/kg dry wt	-	-	-	< 0.010	< 0.011
Cyhalothrin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Cypermethrin	mg/kg dry wt	-	-	-	< 0.02	< 0.03
Cyproconazole	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Cyprodinil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
2,4'-DDD	mg/kg dry wt	-	-	-	< 0.012	< 0.013
4,4'-DDD	mg/kg dry wt	-	-	-	< 0.012	< 0.013
2,4'-DDE	mg/kg dry wt	-	-	-	< 0.012	< 0.013
4,4'-DDE	mg/kg dry wt	-	-	-	< 0.012	< 0.013
2,4'-DDT	mg/kg dry wt	-	-	-	< 0.012	< 0.013
4,4'-DDT	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Total DDT Isomers	mg/kg dry wt	-	-	-	< 0.07	< 0.08
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Diazinon	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Dichlobenil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Dichlofenthion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Dichlofluanid	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Dichloran	mg/kg dry wt	-	-	-	< 0.03	< 0.03
Dichlorvos	mg/kg dry wt	-	-	-	< 0.010	< 0.010
Dicofol	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Dicrotophos	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Dieldrin	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Difenoconazole	mg/kg dry wt	-	-	-	< 0.012	< 0.012
Dimethoate	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Dinocap	mg/kg dry wt	-	-	-	< 0.09	< 0.10
Diphenylamine	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Diuron	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Endosulfan I	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Endosulfan II	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Endosulfan sulphate	mg/kg dry wt	-	-	-	< 0.012	< 0.013

Sample Type: Soil						
Sample Name:		MN26012 01-Mar-2026	MN26013 01-Mar-2026	MN26014 01-Mar-2026	MN26015 01-Mar-2026	MN26016 01-Mar-2026
Lab Number:		4115941.6	4115941.7	4115941.8	4115941.9	4115941.10
Multiresidue Pesticides in Soil samples by GCMS						
Endrin	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Endrin aldehyde	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Endrin ketone	mg/kg dry wt	-	-	-	< 0.012	< 0.013
EPN	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Ethion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Etrinfos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Famphur	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fenarimol	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fenitrothion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fenpropathrin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fenpropimorph	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fensulfothion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	-	-	-	< 0.012	< 0.012
Fluazifop-butyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fluometuron	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Flusilazole	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Fluvalinate	mg/kg dry wt	-	-	-	< 0.006	< 0.006
Folpet	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Furalaxyl	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Haloxifop-methyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Heptachlor	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Heptachlor epoxide	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Hexachlorobenzene	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Hexaconazole	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Hexazinone	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Hexythiazox	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Imazalil	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Indoxacarb	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Iodofenphos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Isazophos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Isofenphos	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Kresoxim-methyl	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Leptophos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Linuron	mg/kg dry wt	-	-	-	< 0.08	< 0.09
Malathion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Metalaxyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Methacrifos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Methamidophos	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Methidathion	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Methiocarb	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Methoxychlor	mg/kg dry wt	-	-	-	< 0.012	< 0.013
Metolachlor	mg/kg dry wt	-	-	-	< 0.006	< 0.006
Metribuzin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Mevinphos	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Molinate	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Myclobutanil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Naled	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Nitrofen	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Nitrothal-isopropyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Norflurazon	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Omethoate	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Oxadiazon	mg/kg dry wt	-	-	-	< 0.008	< 0.009

Sample Type: Soil						
Sample Name:		MN26012 01-Mar-2026	MN26013 01-Mar-2026	MN26014 01-Mar-2026	MN26015 01-Mar-2026	MN26016 01-Mar-2026
Lab Number:		4115941.6	4115941.7	4115941.8	4115941.9	4115941.10
Multiresidue Pesticides in Soil samples by GCMS						
Oxychlorane	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Oxyfluorfen	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Paclobutrazol	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Parathion-ethyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Parathion-methyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Penconazole	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Pendimethalin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Permethrin	mg/kg dry wt	-	-	-	< 0.003	< 0.003
Phosmet	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Phosphamidon	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Pirimicarb	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Pirimiphos-methyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Prochloraz	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Procymidone	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Prometryn	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Propachlor	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Propanil	mg/kg dry wt	-	-	-	< 0.03	< 0.03
Propazine	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Propetamphos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Propham	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Propiconazole	mg/kg dry wt	-	-	-	< 0.006	< 0.006
Prothiofos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Pyrazophos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
PyrifenoX	mg/kg dry wt	-	-	-	< 0.012	< 0.012
Pyrimethanil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Pyriproxyfen	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Quintozene	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Quizalofop-ethyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Simazine	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Simetryn	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Sulfentrazone	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Sulfotep	mg/kg dry wt	-	-	-	< 0.008	< 0.009
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	-	-	< 0.016	< 0.017
Tebuconazole	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Tebufenpyrad	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Terbacil	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Terbumeton	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Terbuthylazine	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Terbuthylazine-desethyl	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Terbutryn	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Tetrachlorvinphos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Thiabendazole	mg/kg dry wt	-	-	-	< 0.04	< 0.05
Thiobencarb	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Tolylfluanid	mg/kg dry wt	-	-	-	< 0.004	< 0.005
Triadimefon	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Triazophos	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Trifluralin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Vinclozolin	mg/kg dry wt	-	-	-	< 0.008	< 0.009
Sample Name:		MN26017 01-Mar-2026	MN26018 01-Mar-2026	MN26019 01-Mar-2026	MN26020 01-Mar-2026	MN26021 01-Mar-2026
Lab Number:		4115941.11	4115941.12	4115941.13	4115941.14	4115941.15
Individual Tests						
Dry Matter	g/100g as rcvd	79	76	60	66	64

Sample Type: Soil						
Sample Name:		MN26017 01-Mar-2026	MN26018 01-Mar-2026	MN26019 01-Mar-2026	MN26020 01-Mar-2026	MN26021 01-Mar-2026
Lab Number:		4115941.11	4115941.12	4115941.13	4115941.14	4115941.15
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	2	7	7	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.19	< 0.10	0.97	0.82	0.39
Total Recoverable Chromium	mg/kg dry wt	7	8	10	9	7
Total Recoverable Copper	mg/kg dry wt	4	4	118	88	14
Total Recoverable Lead	mg/kg dry wt	6.7	7.9	82	89	12.6
Total Recoverable Nickel	mg/kg dry wt	11	3	25	24	16
Total Recoverable Zinc	mg/kg dry wt	16	8	900	750	450
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Alachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Aldrin	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Atrazine	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Atrazine-desethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Atrazine-desisopropyl	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Azaconazole	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Azinphos-methyl	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Benalaxyl	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Bendiocarb	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Benodanil	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
alpha-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
beta-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
delta-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Bifenthrin	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Bitertanol	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Bromacil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Bromophos-ethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Bromopropylate	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Bupirimate	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Buprofezin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Butachlor	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Captafol	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Captan	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Carbaryl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Carbofenthion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Carbofuran	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Chlorfenvinphos	mg/kg dry wt	< 0.013	< 0.013	< 0.016	< 0.015	< 0.015
Chlorfluazuron	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Chlorothalonil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Chlorpropham	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Chlorpyrifos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Chlorpyrifos-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Chlortoluron	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Chlzolinate	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Coumaphos	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Cyanazine	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Cyfluthrin	mg/kg dry wt	< 0.011	< 0.011	< 0.014	< 0.013	< 0.013
Cyhalothrin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Cypermethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Cyproconazole	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Cyprodinil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016

Sample Type: Soil						
Sample Name:		MN26017 01-Mar-2026	MN26018 01-Mar-2026	MN26019 01-Mar-2026	MN26020 01-Mar-2026	MN26021 01-Mar-2026
Lab Number:		4115941.11	4115941.12	4115941.13	4115941.14	4115941.15
Multiresidue Pesticides in Soil samples by GCMS						
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
4,4'-DDE	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.08	< 0.10	< 0.09	< 0.10
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Diazinon	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Dichlobenil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Dichlofenthion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Dichlofluanid	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Dichloran	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlorvos	mg/kg dry wt	< 0.010	< 0.010	< 0.012	< 0.011	< 0.011
Dicofol	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Dicrotophos	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Dieldrin	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Difenoconazole	mg/kg dry wt	< 0.013	< 0.013	< 0.016	< 0.015	< 0.015
Dimethoate	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Dinocap	mg/kg dry wt	< 0.10	< 0.10	< 0.13	< 0.12	< 0.12
Diphenylamine	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Diuron	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Endosulfan I	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Endosulfan II	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Endrin	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Endrin ketone	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
EPN	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Ethion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Etrinfos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Famphur	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fenarimol	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fenitrothion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fenpropathrin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fenpropimorph	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fensulfothion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.013	< 0.013	< 0.016	< 0.015	< 0.015
Fluazifop-butyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fluometuron	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Flusilazole	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Fluvalinate	mg/kg dry wt	< 0.007	< 0.007	< 0.008	< 0.008	< 0.008
Folpet	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Furalaxyl	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Haloxifop-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Heptachlor	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Hexaconazole	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Hexazinone	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Hexythiazox	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Imazalil	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Indoxacarb	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Iodofenphos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06

Sample Type: Soil						
Sample Name:		MN26017 01-Mar-2026	MN26018 01-Mar-2026	MN26019 01-Mar-2026	MN26020 01-Mar-2026	MN26021 01-Mar-2026
Lab Number:		4115941.11	4115941.12	4115941.13	4115941.14	4115941.15
Multiresidue Pesticides in Soil samples by GCMS						
Isazophos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Isofenphos	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Kresoxim-methyl	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Leptophos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Linuron	mg/kg dry wt	< 0.09	< 0.09	< 0.12	< 0.11	< 0.11
Malathion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Metalaxyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Methacrifos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Methamidophos	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Methidathion	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Methiocarb	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Methoxychlor	mg/kg dry wt	< 0.013	< 0.014	< 0.016	< 0.015	< 0.016
Metolachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Metribuzin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Mevinphos	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Molinate	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Myclobutanil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Naled	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Nitrofen	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Nitrothal-isopropyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Norflurazon	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Omethoate	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Oxadiazon	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Oxychlordane	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Oxyfluorfen	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Paclobutrazol	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Parathion-ethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Parathion-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Penconazole	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Pendimethalin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Permethrin	mg/kg dry wt	< 0.003	< 0.003	< 0.004	< 0.003	< 0.003
Phosmet	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Phosphamidon	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Pirimicarb	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Pirimiphos-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Prochloraz	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Procymidone	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Prometryn	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Propachlor	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Propanil	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propazine	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Propetamphos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Propham	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Propiconazole	mg/kg dry wt	< 0.007	< 0.007	< 0.008	< 0.008	< 0.008
Prothiofos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Pyrazophos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Pyrifenox	mg/kg dry wt	< 0.013	< 0.013	< 0.016	< 0.015	< 0.015
Pyrimethanil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Pyriproxyfen	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Quintozene	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Quizalofop-ethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Simazine	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Simetryn	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Sulfentrazone	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Sulfotep	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011

Sample Type: Soil						
Sample Name:		MN26017 01-Mar-2026	MN26018 01-Mar-2026	MN26019 01-Mar-2026	MN26020 01-Mar-2026	MN26021 01-Mar-2026
Lab Number:		4115941.11	4115941.12	4115941.13	4115941.14	4115941.15
Multiresidue Pesticides in Soil samples by GCMS						
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.018	< 0.018	< 0.03	< 0.03	< 0.03
Tebuconazole	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Tebufenpyrad	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Terbacil	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Terbumeton	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Terbutylazine	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Terbutylazine-desethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Terbutryn	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Tetrachlorvinphos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Thiabendazole	mg/kg dry wt	< 0.05	< 0.05	< 0.06	< 0.06	< 0.06
Thiobencarb	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Tolyfluanid	mg/kg dry wt	< 0.005	< 0.005	< 0.006	< 0.006	< 0.006
Triadimefon	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Triazophos	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Trifluralin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Vinclozolin	mg/kg dry wt	< 0.009	< 0.009	< 0.012	< 0.011	< 0.011
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	-	-	< 0.4	< 0.4	< 0.4
1-Methylnaphthalene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
2-Methylnaphthalene	mg/kg dry wt	-	-	< 0.03	< 0.016	< 0.017
Acenaphthylene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Acenaphthene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Anthracene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Benzo[a]anthracene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	< 0.039	< 0.035	< 0.037
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	< 0.039	< 0.035	< 0.037
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Benzo[e]pyrene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Benzo[k]fluoranthene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Chrysene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Fluoranthene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Fluorene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Naphthalene	mg/kg dry wt	-	-	< 0.08	< 0.08	< 0.08
Perylene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Phenanthrene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Pyrene	mg/kg dry wt	-	-	< 0.016	< 0.015	< 0.016
Sample Name:		MN26024 01-Mar-2026	MN26025 01-Mar-2026	MN26026 01-Mar-2026	MN26027 01-Mar-2026	MN26028 01-Mar-2026
Lab Number:		4115941.16	4115941.17	4115941.18	4115941.19	4115941.20
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	4	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.15	0.16	< 0.10	0.13	< 0.10
Total Recoverable Chromium	mg/kg dry wt	12	5	4	5	4
Total Recoverable Copper	mg/kg dry wt	20	4	3	5	5
Total Recoverable Lead	mg/kg dry wt	12.6	6.1	4.3	7.8	7.0
Total Recoverable Nickel	mg/kg dry wt	12	3	< 2	3	< 2
Total Recoverable Zinc	mg/kg dry wt	59	5	< 4	< 4	< 4

Sample Type: Soil						
Sample Name:		MN26029 01-Mar-2026	MN26030 01-Mar-2026	MN26031 01-Mar-2026	MN26032 01-Mar-2026	MN26033 01-Mar-2026
Lab Number:		4115941.21	4115941.22	4115941.23	4115941.24	4115941.25
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.13	< 0.10	0.35	0.33	< 0.10
Total Recoverable Chromium	mg/kg dry wt	5	4	10	9	6
Total Recoverable Copper	mg/kg dry wt	5	7	8	7	7
Total Recoverable Lead	mg/kg dry wt	5.3	9.4	8.7	7.9	6.1
Total Recoverable Nickel	mg/kg dry wt	2	< 2	12	10	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	< 4	14	12	< 4
Sample Name:		MN26034 01-Mar-2026	MN26035 01-Mar-2026	MN26036 01-Mar-2026	MN26037 01-Mar-2026	MN26038 01-Mar-2026
Lab Number:		4115941.26	4115941.27	4115941.28	4115941.29	4115941.30
Individual Tests						
Dry Matter	g/100g as rcvd	-	-	-	-	75
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.12	< 0.10	0.18	< 0.10	0.14
Total Recoverable Chromium	mg/kg dry wt	6	7	4	5	3
Total Recoverable Copper	mg/kg dry wt	8	7	5	3	< 2
Total Recoverable Lead	mg/kg dry wt	7.6	6.4	6.6	4.8	3.8
Total Recoverable Nickel	mg/kg dry wt	2	< 2	< 2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	4	< 4	4	< 4	< 4
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	-	-	-	-	< 0.009
Alachlor	mg/kg dry wt	-	-	-	-	< 0.006
Aldrin	mg/kg dry wt	-	-	-	-	< 0.013
Atrazine	mg/kg dry wt	-	-	-	-	< 0.009
Atrazine-desethyl	mg/kg dry wt	-	-	-	-	< 0.009
Atrazine-desisopropyl	mg/kg dry wt	-	-	-	-	< 0.018
Azaconazole	mg/kg dry wt	-	-	-	-	< 0.005
Azinphos-methyl	mg/kg dry wt	-	-	-	-	< 0.05
Benalaxyl	mg/kg dry wt	-	-	-	-	< 0.005
Bendiocarb	mg/kg dry wt	-	-	-	-	< 0.009
Benodanil	mg/kg dry wt	-	-	-	-	< 0.018
alpha-BHC	mg/kg dry wt	-	-	-	-	< 0.013
beta-BHC	mg/kg dry wt	-	-	-	-	< 0.013
delta-BHC	mg/kg dry wt	-	-	-	-	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	-	-	-	-	< 0.013
Bifenthrin	mg/kg dry wt	-	-	-	-	< 0.005
Bitertanol	mg/kg dry wt	-	-	-	-	< 0.018
Bromacil	mg/kg dry wt	-	-	-	-	< 0.009
Bromophos-ethyl	mg/kg dry wt	-	-	-	-	< 0.009
Bromopropylate	mg/kg dry wt	-	-	-	-	< 0.009
Bupirimate	mg/kg dry wt	-	-	-	-	< 0.009
Buprofezin	mg/kg dry wt	-	-	-	-	< 0.009
Butachlor	mg/kg dry wt	-	-	-	-	< 0.009
Captafol	mg/kg dry wt	-	-	-	-	< 0.05
Captan	mg/kg dry wt	-	-	-	-	< 0.018
Carbaryl	mg/kg dry wt	-	-	-	-	< 0.009
Carbofenothon	mg/kg dry wt	-	-	-	-	< 0.009
Carbofuran	mg/kg dry wt	-	-	-	-	< 0.009
cis-Chlordane	mg/kg dry wt	-	-	-	-	< 0.013
trans-Chlordane	mg/kg dry wt	-	-	-	-	< 0.013
Chlorfenvinphos	mg/kg dry wt	-	-	-	-	< 0.013
Chlorfluazuron	mg/kg dry wt	-	-	-	-	< 0.009
Chlorothalonil	mg/kg dry wt	-	-	-	-	< 0.009
Chlorpropham	mg/kg dry wt	-	-	-	-	< 0.018

Sample Type: Soil						
Sample Name:		MN26034 01-Mar-2026	MN26035 01-Mar-2026	MN26036 01-Mar-2026	MN26037 01-Mar-2026	MN26038 01-Mar-2026
Lab Number:		4115941.26	4115941.27	4115941.28	4115941.29	4115941.30
Multiresidue Pesticides in Soil samples by GCMS						
Chlorpyrifos	mg/kg dry wt	-	-	-	-	< 0.009
Chlorpyrifos-methyl	mg/kg dry wt	-	-	-	-	< 0.009
Chlortoluron	mg/kg dry wt	-	-	-	-	< 0.018
Chlozolinate	mg/kg dry wt	-	-	-	-	< 0.009
Coumaphos	mg/kg dry wt	-	-	-	-	< 0.018
Cyanazine	mg/kg dry wt	-	-	-	-	< 0.009
Cyfluthrin	mg/kg dry wt	-	-	-	-	< 0.011
Cyhalothrin	mg/kg dry wt	-	-	-	-	< 0.009
Cypermethrin	mg/kg dry wt	-	-	-	-	< 0.03
Cyproconazole	mg/kg dry wt	-	-	-	-	< 0.018
Cyprodinil	mg/kg dry wt	-	-	-	-	< 0.009
2,4'-DDD	mg/kg dry wt	-	-	-	-	< 0.013
4,4'-DDD	mg/kg dry wt	-	-	-	-	< 0.013
2,4'-DDE	mg/kg dry wt	-	-	-	-	< 0.013
4,4'-DDE	mg/kg dry wt	-	-	-	-	< 0.013
2,4'-DDT	mg/kg dry wt	-	-	-	-	< 0.013
4,4'-DDT	mg/kg dry wt	-	-	-	-	< 0.013
Total DDT Isomers	mg/kg dry wt	-	-	-	-	< 0.08
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	-	-	-	< 0.009
Diazinon	mg/kg dry wt	-	-	-	-	< 0.005
Dichlobenil	mg/kg dry wt	-	-	-	-	< 0.009
Dichlofenthion	mg/kg dry wt	-	-	-	-	< 0.009
Dichlofluanid	mg/kg dry wt	-	-	-	-	< 0.009
Dichloran	mg/kg dry wt	-	-	-	-	< 0.03
Dichlorvos	mg/kg dry wt	-	-	-	-	< 0.010
Dicofol	mg/kg dry wt	-	-	-	-	< 0.05
Dicrotophos	mg/kg dry wt	-	-	-	-	< 0.05
Dieldrin	mg/kg dry wt	-	-	-	-	< 0.013
Difenoconazole	mg/kg dry wt	-	-	-	-	< 0.013
Dimethoate	mg/kg dry wt	-	-	-	-	< 0.018
Dinocap	mg/kg dry wt	-	-	-	-	< 0.10
Diphenylamine	mg/kg dry wt	-	-	-	-	< 0.018
Diuron	mg/kg dry wt	-	-	-	-	< 0.009
Endosulfan I	mg/kg dry wt	-	-	-	-	< 0.013
Endosulfan II	mg/kg dry wt	-	-	-	-	< 0.013
Endosulfan sulphate	mg/kg dry wt	-	-	-	-	< 0.013
Endrin	mg/kg dry wt	-	-	-	-	< 0.013
Endrin aldehyde	mg/kg dry wt	-	-	-	-	< 0.013
Endrin ketone	mg/kg dry wt	-	-	-	-	< 0.013
EPN	mg/kg dry wt	-	-	-	-	< 0.009
Ethion	mg/kg dry wt	-	-	-	-	< 0.009
Etrimfos	mg/kg dry wt	-	-	-	-	< 0.009
Famphur	mg/kg dry wt	-	-	-	-	< 0.009
Fenarimol	mg/kg dry wt	-	-	-	-	< 0.009
Fenitrothion	mg/kg dry wt	-	-	-	-	< 0.009
Fenpropathrin	mg/kg dry wt	-	-	-	-	< 0.009
Fenpropimorph	mg/kg dry wt	-	-	-	-	< 0.009
Fensulfothion	mg/kg dry wt	-	-	-	-	< 0.009
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	-	-	-	-	< 0.013
Fluazifop-butyl	mg/kg dry wt	-	-	-	-	< 0.009
Fluometuron	mg/kg dry wt	-	-	-	-	< 0.009
Flusilazole	mg/kg dry wt	-	-	-	-	< 0.009
Fluvalinate	mg/kg dry wt	-	-	-	-	< 0.007

Sample Type: Soil						
Sample Name:		MN26034 01-Mar-2026	MN26035 01-Mar-2026	MN26036 01-Mar-2026	MN26037 01-Mar-2026	MN26038 01-Mar-2026
Lab Number:		4115941.26	4115941.27	4115941.28	4115941.29	4115941.30
Multiresidue Pesticides in Soil samples by GCMS						
Folpet	mg/kg dry wt	-	-	-	-	< 0.018
Furalaxyl	mg/kg dry wt	-	-	-	-	< 0.005
Haloxyfop-methyl	mg/kg dry wt	-	-	-	-	< 0.009
Heptachlor	mg/kg dry wt	-	-	-	-	< 0.013
Heptachlor epoxide	mg/kg dry wt	-	-	-	-	< 0.013
Hexachlorobenzene	mg/kg dry wt	-	-	-	-	< 0.013
Hexaconazole	mg/kg dry wt	-	-	-	-	< 0.009
Hexazinone	mg/kg dry wt	-	-	-	-	< 0.005
Hexythiazox	mg/kg dry wt	-	-	-	-	< 0.05
Imazalil	mg/kg dry wt	-	-	-	-	< 0.05
Indoxacarb	mg/kg dry wt	-	-	-	-	< 0.009
Iodofenphos	mg/kg dry wt	-	-	-	-	< 0.009
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	-	-	-	< 0.05
Isazophos	mg/kg dry wt	-	-	-	-	< 0.009
Isofenphos	mg/kg dry wt	-	-	-	-	< 0.005
Kresoxim-methyl	mg/kg dry wt	-	-	-	-	< 0.005
Leptophos	mg/kg dry wt	-	-	-	-	< 0.009
Linuron	mg/kg dry wt	-	-	-	-	< 0.09
Malathion	mg/kg dry wt	-	-	-	-	< 0.009
Metalaxyl	mg/kg dry wt	-	-	-	-	< 0.009
Methacrifos	mg/kg dry wt	-	-	-	-	< 0.009
Methamidophos	mg/kg dry wt	-	-	-	-	< 0.05
Methidathion	mg/kg dry wt	-	-	-	-	< 0.009
Methiocarb	mg/kg dry wt	-	-	-	-	< 0.009
Methoxychlor	mg/kg dry wt	-	-	-	-	< 0.013
Metolachlor	mg/kg dry wt	-	-	-	-	< 0.006
Metribuzin	mg/kg dry wt	-	-	-	-	< 0.009
Mevinphos	mg/kg dry wt	-	-	-	-	< 0.018
Molinate	mg/kg dry wt	-	-	-	-	< 0.018
Myclobutanil	mg/kg dry wt	-	-	-	-	< 0.009
Naled	mg/kg dry wt	-	-	-	-	< 0.05
Nitrofen	mg/kg dry wt	-	-	-	-	< 0.018
Nitrothal-isopropyl	mg/kg dry wt	-	-	-	-	< 0.009
Norflurazon	mg/kg dry wt	-	-	-	-	< 0.018
Omethoate	mg/kg dry wt	-	-	-	-	< 0.05
Oxadiazon	mg/kg dry wt	-	-	-	-	< 0.009
Oxychlorfene	mg/kg dry wt	-	-	-	-	< 0.005
Oxyfluorfen	mg/kg dry wt	-	-	-	-	< 0.005
Paclobutrazol	mg/kg dry wt	-	-	-	-	< 0.009
Parathion-ethyl	mg/kg dry wt	-	-	-	-	< 0.009
Parathion-methyl	mg/kg dry wt	-	-	-	-	< 0.009
Penconazole	mg/kg dry wt	-	-	-	-	< 0.009
Pendimethalin	mg/kg dry wt	-	-	-	-	< 0.009
Permethrin	mg/kg dry wt	-	-	-	-	< 0.003
Phosmet	mg/kg dry wt	-	-	-	-	< 0.009
Phosphamidon	mg/kg dry wt	-	-	-	-	< 0.009
Pirimicarb	mg/kg dry wt	-	-	-	-	< 0.009
Pirimiphos-methyl	mg/kg dry wt	-	-	-	-	< 0.009
Prochloraz	mg/kg dry wt	-	-	-	-	< 0.05
Procymidone	mg/kg dry wt	-	-	-	-	< 0.009
Prometryn	mg/kg dry wt	-	-	-	-	< 0.005
Propachlor	mg/kg dry wt	-	-	-	-	< 0.009
Propanil	mg/kg dry wt	-	-	-	-	< 0.03
Propazine	mg/kg dry wt	-	-	-	-	< 0.005

Sample Type: Soil						
Sample Name:		MN26034 01-Mar-2026	MN26035 01-Mar-2026	MN26036 01-Mar-2026	MN26037 01-Mar-2026	MN26038 01-Mar-2026
Lab Number:		4115941.26	4115941.27	4115941.28	4115941.29	4115941.30
Multiresidue Pesticides in Soil samples by GCMS						
Propetamphos	mg/kg dry wt	-	-	-	-	< 0.009
Propham	mg/kg dry wt	-	-	-	-	< 0.009
Propiconazole	mg/kg dry wt	-	-	-	-	< 0.007
Prothiofos	mg/kg dry wt	-	-	-	-	< 0.009
Pyrazophos	mg/kg dry wt	-	-	-	-	< 0.009
PyrifenoX	mg/kg dry wt	-	-	-	-	< 0.013
Pyrimethanil	mg/kg dry wt	-	-	-	-	< 0.009
Pyriproxyfen	mg/kg dry wt	-	-	-	-	< 0.009
Quintozene	mg/kg dry wt	-	-	-	-	< 0.018
Quizalofop-ethyl	mg/kg dry wt	-	-	-	-	< 0.009
Simazine	mg/kg dry wt	-	-	-	-	< 0.009
Simetryn	mg/kg dry wt	-	-	-	-	< 0.009
Sulfentrazone	mg/kg dry wt	-	-	-	-	< 0.05
Sulfotep	mg/kg dry wt	-	-	-	-	< 0.009
TCMTB [2-(thiocyanomethylthio)benzothiazole, Busan]	mg/kg dry wt	-	-	-	-	< 0.018
Tebuconazole	mg/kg dry wt	-	-	-	-	< 0.009
Tebufenpyrad	mg/kg dry wt	-	-	-	-	< 0.005
Terbacil	mg/kg dry wt	-	-	-	-	< 0.009
Terbumeton	mg/kg dry wt	-	-	-	-	< 0.009
Terbuthylazine	mg/kg dry wt	-	-	-	-	< 0.005
Terbuthylazine-desethyl	mg/kg dry wt	-	-	-	-	< 0.009
Terbutryn	mg/kg dry wt	-	-	-	-	< 0.009
Tetrachlorvinphos	mg/kg dry wt	-	-	-	-	< 0.009
Thiabendazole	mg/kg dry wt	-	-	-	-	< 0.05
Thiobencarb	mg/kg dry wt	-	-	-	-	< 0.009
Tolyfluanid	mg/kg dry wt	-	-	-	-	< 0.005
Triadimefon	mg/kg dry wt	-	-	-	-	< 0.009
Triazophos	mg/kg dry wt	-	-	-	-	< 0.009
Trifluralin	mg/kg dry wt	-	-	-	-	< 0.009
Vinclozolin	mg/kg dry wt	-	-	-	-	< 0.009
Sample Name:		MN26039 01-Mar-2026	MN26040 01-Mar-2026	MN26041 01-Mar-2026	MN26042 01-Mar-2026	MN26043 01-Mar-2026
Lab Number:		4115941.31	4115941.32	4115941.33	4115941.34	4115941.35
Individual Tests						
Dry Matter	g/100g as rcvd	82	-	-	-	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.12	< 0.10	0.17	< 0.10
Total Recoverable Chromium	mg/kg dry wt	3	8	9	8	7
Total Recoverable Copper	mg/kg dry wt	< 2	10	7	11	10
Total Recoverable Lead	mg/kg dry wt	3.7	11.4	10.1	10.2	8.2
Total Recoverable Nickel	mg/kg dry wt	< 2	2	2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	13	6	6	< 4
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.009	-	-	-	-
Alachlor	mg/kg dry wt	< 0.006	-	-	-	-
Aldrin	mg/kg dry wt	< 0.012	-	-	-	-
Atrazine	mg/kg dry wt	< 0.009	-	-	-	-
Atrazine-desethyl	mg/kg dry wt	< 0.009	-	-	-	-
Atrazine-desisopropyl	mg/kg dry wt	< 0.017	-	-	-	-
Azaconazole	mg/kg dry wt	< 0.005	-	-	-	-
Azinphos-methyl	mg/kg dry wt	< 0.05	-	-	-	-
Benalaxyl	mg/kg dry wt	< 0.005	-	-	-	-
Bendiocarb	mg/kg dry wt	< 0.009	-	-	-	-

Sample Type: Soil						
Sample Name:		MN26039 01-Mar-2026	MN26040 01-Mar-2026	MN26041 01-Mar-2026	MN26042 01-Mar-2026	MN26043 01-Mar-2026
Lab Number:		4115941.31	4115941.32	4115941.33	4115941.34	4115941.35
Multiresidue Pesticides in Soil samples by GCMS						
Benodanil	mg/kg dry wt	< 0.017	-	-	-	-
alpha-BHC	mg/kg dry wt	< 0.012	-	-	-	-
beta-BHC	mg/kg dry wt	< 0.012	-	-	-	-
delta-BHC	mg/kg dry wt	< 0.012	-	-	-	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012	-	-	-	-
Bifenthrin	mg/kg dry wt	< 0.005	-	-	-	-
Bitertanol	mg/kg dry wt	< 0.017	-	-	-	-
Bromacil	mg/kg dry wt	< 0.009	-	-	-	-
Bromophos-ethyl	mg/kg dry wt	< 0.009	-	-	-	-
Bromopropylate	mg/kg dry wt	< 0.009	-	-	-	-
Bupirimate	mg/kg dry wt	< 0.009	-	-	-	-
Buprofezin	mg/kg dry wt	< 0.009	-	-	-	-
Butachlor	mg/kg dry wt	< 0.009	-	-	-	-
Captafol	mg/kg dry wt	< 0.05	-	-	-	-
Captan	mg/kg dry wt	< 0.017	-	-	-	-
Carbaryl	mg/kg dry wt	< 0.009	-	-	-	-
Carbofenthion	mg/kg dry wt	< 0.009	-	-	-	-
Carbofuran	mg/kg dry wt	< 0.009	-	-	-	-
cis-Chlordane	mg/kg dry wt	< 0.012	-	-	-	-
trans-Chlordane	mg/kg dry wt	< 0.012	-	-	-	-
Chlorfenvinphos	mg/kg dry wt	< 0.012	-	-	-	-
Chlorfluazuron	mg/kg dry wt	< 0.009	-	-	-	-
Chlorothalonil	mg/kg dry wt	< 0.009	-	-	-	-
Chlorpropham	mg/kg dry wt	< 0.017	-	-	-	-
Chlorpyrifos	mg/kg dry wt	< 0.009	-	-	-	-
Chlorpyrifos-methyl	mg/kg dry wt	< 0.009	-	-	-	-
Chlortoluron	mg/kg dry wt	< 0.017	-	-	-	-
Chlozolinate	mg/kg dry wt	< 0.009	-	-	-	-
Coumaphos	mg/kg dry wt	< 0.017	-	-	-	-
Cyanazine	mg/kg dry wt	< 0.009	-	-	-	-
Cyfluthrin	mg/kg dry wt	< 0.011	-	-	-	-
Cyhalothrin	mg/kg dry wt	< 0.009	-	-	-	-
Cypermethrin	mg/kg dry wt	< 0.03	-	-	-	-
Cyproconazole	mg/kg dry wt	< 0.017	-	-	-	-
Cyprodinil	mg/kg dry wt	< 0.009	-	-	-	-
2,4'-DDD	mg/kg dry wt	< 0.012	-	-	-	-
4,4'-DDD	mg/kg dry wt	< 0.012	-	-	-	-
2,4'-DDE	mg/kg dry wt	< 0.012	-	-	-	-
4,4'-DDE	mg/kg dry wt	< 0.012	-	-	-	-
2,4'-DDT	mg/kg dry wt	< 0.012	-	-	-	-
4,4'-DDT	mg/kg dry wt	< 0.012	-	-	-	-
Total DDT Isomers	mg/kg dry wt	< 0.08	-	-	-	-
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.009	-	-	-	-
Diazinon	mg/kg dry wt	< 0.005	-	-	-	-
Dichlobenil	mg/kg dry wt	< 0.009	-	-	-	-
Dichlofenthion	mg/kg dry wt	< 0.009	-	-	-	-
Dichlofluanid	mg/kg dry wt	< 0.009	-	-	-	-
Dichloran	mg/kg dry wt	< 0.03	-	-	-	-
Dichlorvos	mg/kg dry wt	< 0.010	-	-	-	-
Dicofol	mg/kg dry wt	< 0.05	-	-	-	-
Dicrotophos	mg/kg dry wt	< 0.05	-	-	-	-
Dieldrin	mg/kg dry wt	< 0.012	-	-	-	-
Difenoconazole	mg/kg dry wt	< 0.012	-	-	-	-
Dimethoate	mg/kg dry wt	< 0.017	-	-	-	-

Sample Type: Soil						
Sample Name:		MN26039 01-Mar-2026	MN26040 01-Mar-2026	MN26041 01-Mar-2026	MN26042 01-Mar-2026	MN26043 01-Mar-2026
Lab Number:		4115941.31	4115941.32	4115941.33	4115941.34	4115941.35
Multiresidue Pesticides in Soil samples by GCMS						
Dinocap	mg/kg dry wt	< 0.10	-	-	-	-
Diphenylamine	mg/kg dry wt	< 0.017	-	-	-	-
Diuron	mg/kg dry wt	< 0.009	-	-	-	-
Endosulfan I	mg/kg dry wt	< 0.012	-	-	-	-
Endosulfan II	mg/kg dry wt	< 0.012	-	-	-	-
Endosulfan sulphate	mg/kg dry wt	< 0.012	-	-	-	-
Endrin	mg/kg dry wt	< 0.012	-	-	-	-
Endrin aldehyde	mg/kg dry wt	< 0.012	-	-	-	-
Endrin ketone	mg/kg dry wt	< 0.012	-	-	-	-
EPN	mg/kg dry wt	< 0.009	-	-	-	-
Ethion	mg/kg dry wt	< 0.009	-	-	-	-
Etrinfos	mg/kg dry wt	< 0.009	-	-	-	-
Famphur	mg/kg dry wt	< 0.009	-	-	-	-
Fenarimol	mg/kg dry wt	< 0.009	-	-	-	-
Fenitrothion	mg/kg dry wt	< 0.009	-	-	-	-
Fenpropathrin	mg/kg dry wt	< 0.009	-	-	-	-
Fenpropimorph	mg/kg dry wt	< 0.009	-	-	-	-
Fensulfothion	mg/kg dry wt	< 0.009	-	-	-	-
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.012	-	-	-	-
Fluazifop-butyl	mg/kg dry wt	< 0.009	-	-	-	-
Fluometuron	mg/kg dry wt	< 0.009	-	-	-	-
Flusilazole	mg/kg dry wt	< 0.009	-	-	-	-
Fluvalinate	mg/kg dry wt	< 0.006	-	-	-	-
Folpet	mg/kg dry wt	< 0.017	-	-	-	-
Furalaxyl	mg/kg dry wt	< 0.005	-	-	-	-
Haloxyfop-methyl	mg/kg dry wt	< 0.009	-	-	-	-
Heptachlor	mg/kg dry wt	< 0.012	-	-	-	-
Heptachlor epoxide	mg/kg dry wt	< 0.012	-	-	-	-
Hexachlorobenzene	mg/kg dry wt	< 0.012	-	-	-	-
Hexaconazole	mg/kg dry wt	< 0.009	-	-	-	-
Hexazinone	mg/kg dry wt	< 0.005	-	-	-	-
Hexythiazox	mg/kg dry wt	< 0.05	-	-	-	-
Imazalil	mg/kg dry wt	< 0.05	-	-	-	-
Indoxacarb	mg/kg dry wt	< 0.009	-	-	-	-
Iodofenphos	mg/kg dry wt	< 0.009	-	-	-	-
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.05	-	-	-	-
Isazophos	mg/kg dry wt	< 0.009	-	-	-	-
Isofenphos	mg/kg dry wt	< 0.005	-	-	-	-
Kresoxim-methyl	mg/kg dry wt	< 0.005	-	-	-	-
Leptophos	mg/kg dry wt	< 0.009	-	-	-	-
Linuron	mg/kg dry wt	< 0.09	-	-	-	-
Malathion	mg/kg dry wt	< 0.009	-	-	-	-
Metalaxyl	mg/kg dry wt	< 0.009	-	-	-	-
Methacrifos	mg/kg dry wt	< 0.009	-	-	-	-
Methamidophos	mg/kg dry wt	< 0.05	-	-	-	-
Methidathion	mg/kg dry wt	< 0.009	-	-	-	-
Methiocarb	mg/kg dry wt	< 0.009	-	-	-	-
Methoxychlor	mg/kg dry wt	< 0.012	-	-	-	-
Metolachlor	mg/kg dry wt	< 0.006	-	-	-	-
Metribuzin	mg/kg dry wt	< 0.009	-	-	-	-
Mevinphos	mg/kg dry wt	< 0.017	-	-	-	-
Molinate	mg/kg dry wt	< 0.017	-	-	-	-
Myclobutanil	mg/kg dry wt	< 0.009	-	-	-	-

Sample Type: Soil						
Sample Name:		MN26039 01-Mar-2026	MN26040 01-Mar-2026	MN26041 01-Mar-2026	MN26042 01-Mar-2026	MN26043 01-Mar-2026
Lab Number:		4115941.31	4115941.32	4115941.33	4115941.34	4115941.35
Multiresidue Pesticides in Soil samples by GCMS						
Naled	mg/kg dry wt	< 0.05	-	-	-	-
Nitrofen	mg/kg dry wt	< 0.017	-	-	-	-
Nitrothal-isopropyl	mg/kg dry wt	< 0.009	-	-	-	-
Norflurazon	mg/kg dry wt	< 0.017	-	-	-	-
Omethoate	mg/kg dry wt	< 0.05	-	-	-	-
Oxadiazon	mg/kg dry wt	< 0.009	-	-	-	-
Oxychlordane	mg/kg dry wt	< 0.005	-	-	-	-
Oxyfluorfen	mg/kg dry wt	< 0.005	-	-	-	-
Paclobutrazol	mg/kg dry wt	< 0.009	-	-	-	-
Parathion-ethyl	mg/kg dry wt	< 0.009	-	-	-	-
Parathion-methyl	mg/kg dry wt	< 0.009	-	-	-	-
Penconazole	mg/kg dry wt	< 0.009	-	-	-	-
Pendimethalin	mg/kg dry wt	< 0.009	-	-	-	-
Permethrin	mg/kg dry wt	< 0.003	-	-	-	-
Phosmet	mg/kg dry wt	< 0.009	-	-	-	-
Phosphamidon	mg/kg dry wt	< 0.009	-	-	-	-
Pirimicarb	mg/kg dry wt	< 0.009	-	-	-	-
Pirimiphos-methyl	mg/kg dry wt	< 0.009	-	-	-	-
Prochloraz	mg/kg dry wt	< 0.05	-	-	-	-
Procymidone	mg/kg dry wt	< 0.009	-	-	-	-
Prometryn	mg/kg dry wt	< 0.005	-	-	-	-
Propachlor	mg/kg dry wt	< 0.009	-	-	-	-
Propanil	mg/kg dry wt	< 0.03	-	-	-	-
Propazine	mg/kg dry wt	< 0.005	-	-	-	-
Propetamphos	mg/kg dry wt	< 0.009	-	-	-	-
Propham	mg/kg dry wt	< 0.009	-	-	-	-
Propiconazole	mg/kg dry wt	< 0.006	-	-	-	-
Prothiofos	mg/kg dry wt	< 0.009	-	-	-	-
Pyrazophos	mg/kg dry wt	< 0.009	-	-	-	-
PyrifenoX	mg/kg dry wt	< 0.012	-	-	-	-
Pyrimethanil	mg/kg dry wt	< 0.009	-	-	-	-
Pyriproxyfen	mg/kg dry wt	< 0.009	-	-	-	-
Quintozone	mg/kg dry wt	< 0.017	-	-	-	-
Quizalofop-ethyl	mg/kg dry wt	< 0.009	-	-	-	-
Simazine	mg/kg dry wt	< 0.009	-	-	-	-
Simetryn	mg/kg dry wt	< 0.009	-	-	-	-
Sulfentrazone	mg/kg dry wt	< 0.05	-	-	-	-
Sulfotep	mg/kg dry wt	< 0.009	-	-	-	-
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.017	-	-	-	-
Tebuconazole	mg/kg dry wt	< 0.009	-	-	-	-
Tebufenpyrad	mg/kg dry wt	< 0.005	-	-	-	-
Terbacil	mg/kg dry wt	< 0.009	-	-	-	-
Terbumeton	mg/kg dry wt	< 0.009	-	-	-	-
Terbuthylazine	mg/kg dry wt	< 0.005	-	-	-	-
Terbuthylazine-desethyl	mg/kg dry wt	< 0.009	-	-	-	-
Terbutryn	mg/kg dry wt	< 0.009	-	-	-	-
Tetrachlorvinphos	mg/kg dry wt	< 0.009	-	-	-	-
Thiabendazole	mg/kg dry wt	< 0.05	-	-	-	-
Thiobencarb	mg/kg dry wt	< 0.009	-	-	-	-
Tolyfluanid	mg/kg dry wt	< 0.005	-	-	-	-
Triadimefon	mg/kg dry wt	< 0.009	-	-	-	-
Triazophos	mg/kg dry wt	< 0.009	-	-	-	-
Trifluralin	mg/kg dry wt	< 0.009	-	-	-	-
Vinclozolin	mg/kg dry wt	< 0.009	-	-	-	-

Sample Type: Soil						
Sample Name:		MN26044 01-Mar-2026	MN26045 01-Mar-2026	MN26046 01-Mar-2026	MN26047 01-Mar-2026	MN26048 01-Mar-2026
Lab Number:		4115941.36	4115941.37	4115941.38	4115941.39	4115941.40
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 4	2	< 2	< 4
Total Recoverable Cadmium	mg/kg dry wt	0.34	0.3	0.20	0.21	< 0.2
Total Recoverable Chromium	mg/kg dry wt	8	8	7	8	6
Total Recoverable Copper	mg/kg dry wt	15	16	12	11	12
Total Recoverable Lead	mg/kg dry wt	9.2	9.9	11.4	9.9	14.8
Total Recoverable Nickel	mg/kg dry wt	3	< 4	< 2	< 2	< 4
Total Recoverable Zinc	mg/kg dry wt	29	30	5	9	< 8
Sample Name:		MN26049 01-Mar-2026	MN26050 01-Mar-2026	MN26051 01-Mar-2026	MN26052 01-Mar-2026	MN26053 01-Mar-2026
Lab Number:		4115941.41	4115941.42	4115941.43	4115941.44	4115941.45
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.29	< 0.10	0.22	< 0.10	0.22
Total Recoverable Chromium	mg/kg dry wt	7	5	7	6	6
Total Recoverable Copper	mg/kg dry wt	15	8	10	11	10
Total Recoverable Lead	mg/kg dry wt	8.4	7.0	8.9	6.5	8.9
Total Recoverable Nickel	mg/kg dry wt	3	< 2	2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	8	< 4	5	< 4	< 4
Sample Name:		MN26054 01-Mar-2026	MN26055 01-Mar-2026	MN26056 01-Mar-2026	MN26057 01-Mar-2026	MN26058 01-Mar-2026
Lab Number:		4115941.46	4115941.47	4115941.48	4115941.49	4115941.50
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.24	< 0.10	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	6	5	4	3	5
Total Recoverable Copper	mg/kg dry wt	9	5	4	3	4
Total Recoverable Lead	mg/kg dry wt	8.0	5.5	5.1	4.5	5.9
Total Recoverable Nickel	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	10	6	6	5
Sample Name:		MN26059 01-Mar-2026	MN26060 01-Mar-2026	MN26062 01-Mar-2026	MN26064 01-Mar-2026	MN26065 01-Mar-2026
Lab Number:		4115941.51	4115941.52	4115941.54	4115941.56	4115941.57
Individual Tests						
Dry Matter	g/100g as rcvd	-	76	76	74	80
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	6	5	3	< 2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.29	0.31	0.36	< 0.10
Total Recoverable Chromium	mg/kg dry wt	5	8	9	7	4
Total Recoverable Copper	mg/kg dry wt	4	12	14	14	3
Total Recoverable Lead	mg/kg dry wt	5.3	69	22	650	300
Total Recoverable Nickel	mg/kg dry wt	< 2	12	4	6	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	77	73	175	56
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Alachlor	mg/kg dry wt	-	< 0.006	< 0.006	-	-
Aldrin	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Atrazine	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Atrazine-desethyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Atrazine-desisopropyl	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Azaconazole	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Azinphos-methyl	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Benalaxyl	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Bendiocarb	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Benodanil	mg/kg dry wt	-	< 0.018	< 0.018	-	-

Sample Type: Soil						
Sample Name:		MN26059 01-Mar-2026	MN26060 01-Mar-2026	MN26062 01-Mar-2026	MN26064 01-Mar-2026	MN26065 01-Mar-2026
Lab Number:		4115941.51	4115941.52	4115941.54	4115941.56	4115941.57
Multiresidue Pesticides in Soil samples by GCMS						
alpha-BHC	mg/kg dry wt	-	< 0.013	< 0.013	-	-
beta-BHC	mg/kg dry wt	-	< 0.013	< 0.013	-	-
delta-BHC	mg/kg dry wt	-	< 0.013	< 0.013	-	-
gamma-BHC (Lindane)	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Bifenthrin	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Bitertanol	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Bromacil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Bromophos-ethyl	mg/kg dry wt	-	< 0.009	0.016	-	-
Bromopropylate	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Bupirimate	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Buprofezin	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Butachlor	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Captafol	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Captan	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Carbaryl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Carbofenothion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Carbofuran	mg/kg dry wt	-	< 0.009	< 0.009	-	-
cis-Chlordane	mg/kg dry wt	-	< 0.013	< 0.013	-	-
trans-Chlordane	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Chlorfenvinphos	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Chlorfluazuron	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Chlorothalonil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Chlorpropham	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Chlorpyrifos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Chlorpyrifos-methyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Chlortoluron	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Chlozolate	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Coumaphos	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Cyanazine	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Cyfluthrin	mg/kg dry wt	-	< 0.011	< 0.011	-	-
Cyhalothrin	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Cypermethrin	mg/kg dry wt	-	< 0.03	< 0.03	-	-
Cyproconazole	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Cyprodinil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
2,4'-DDD	mg/kg dry wt	-	< 0.013	< 0.013	-	-
4,4'-DDD	mg/kg dry wt	-	< 0.013	< 0.013	-	-
2,4'-DDE	mg/kg dry wt	-	< 0.013	< 0.013	-	-
4,4'-DDE	mg/kg dry wt	-	< 0.013	< 0.013	-	-
2,4'-DDT	mg/kg dry wt	-	< 0.013	< 0.013	-	-
4,4'-DDT	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Total DDT Isomers	mg/kg dry wt	-	< 0.08	< 0.08	-	-
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Diazinon	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Dichlobenil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Dichlofenthion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Dichlofluanid	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Dichloran	mg/kg dry wt	-	< 0.03	< 0.03	-	-
Dichlorvos	mg/kg dry wt	-	< 0.010	< 0.010	-	-
Dicofol	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Dicrotophos	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Dieldrin	mg/kg dry wt	-	0.039	0.052	-	-
Difenoconazole	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Dimethoate	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Dinocap	mg/kg dry wt	-	< 0.10	< 0.10	-	-

Sample Type: Soil						
Sample Name:		MN26059 01-Mar-2026	MN26060 01-Mar-2026	MN26062 01-Mar-2026	MN26064 01-Mar-2026	MN26065 01-Mar-2026
Lab Number:		4115941.51	4115941.52	4115941.54	4115941.56	4115941.57
Multiresidue Pesticides in Soil samples by GCMS						
Diphenylamine	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Diuron	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Endosulfan I	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Endosulfan II	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Endosulfan sulphate	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Endrin	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Endrin aldehyde	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Endrin ketone	mg/kg dry wt	-	< 0.013	< 0.013	-	-
EPN	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Ethion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Etrinfos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Famphur	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fenarimol	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fenitrothion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fenpropathrin	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fenpropimorph	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fensulfothion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Fluazifop-butyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fluometuron	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Flusilazole	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Fluvalinate	mg/kg dry wt	-	< 0.007	< 0.007	-	-
Folpet	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Furalaxyl	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Haloxifop-methyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Heptachlor	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Heptachlor epoxide	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Hexachlorobenzene	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Hexaconazole	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Hexazinone	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Hexythiazox	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Imazalil	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Indoxacarb	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Iodofenphos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Isazophos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Isofenphos	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Kresoxim-methyl	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Leptophos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Linuron	mg/kg dry wt	-	< 0.09	< 0.09	-	-
Malathion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Metalaxyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Methacrifos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Methamidophos	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Methidathion	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Methiocarb	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Methoxychlor	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Metolachlor	mg/kg dry wt	-	< 0.006	< 0.006	-	-
Metribuzin	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Mevinphos	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Molinate	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Myclobutanil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Naled	mg/kg dry wt	-	< 0.05	< 0.05	-	-

Sample Type: Soil						
Sample Name:		MN26059 01-Mar-2026	MN26060 01-Mar-2026	MN26062 01-Mar-2026	MN26064 01-Mar-2026	MN26065 01-Mar-2026
Lab Number:		4115941.51	4115941.52	4115941.54	4115941.56	4115941.57
Multiresidue Pesticides in Soil samples by GCMS						
Nitrofen	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Nitrothal-isopropyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Norflurazon	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Omethoate	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Oxadiazon	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Oxychlordan	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Oxyfluorfen	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Paclobutrazol	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Parathion-ethyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Parathion-methyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Penconazole	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Pendimethalin	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Permethrin	mg/kg dry wt	-	< 0.003	< 0.003	-	-
Phosmet	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Phosphamidon	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Pirimicarb	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Pirimiphos-methyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Prochloraz	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Procymidone	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Prometryn	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Propachlor	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Propanil	mg/kg dry wt	-	< 0.03	< 0.03	-	-
Propazine	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Propetamphos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Propham	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Propiconazole	mg/kg dry wt	-	< 0.007	< 0.007	-	-
Prothiofos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Pyrazophos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Pyrifeno	mg/kg dry wt	-	< 0.013	< 0.013	-	-
Pyrimethanil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Pyriproxyfen	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Quintozone	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Quizalofop-ethyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Simazine	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Simetryn	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Sulfentrazone	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Sulfotep	mg/kg dry wt	-	< 0.009	< 0.009	-	-
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	< 0.018	< 0.018	-	-
Tebuconazole	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Tebufenpyrad	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Terbacil	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Terbuteton	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Terbutylazine	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Terbutylazine-desethyl	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Terbutryn	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Tetrachlorvinphos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Thiabendazole	mg/kg dry wt	-	< 0.05	< 0.05	-	-
Thiobencarb	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Tolyfluanid	mg/kg dry wt	-	< 0.005	< 0.005	-	-
Triadimefon	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Triazophos	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Trifluralin	mg/kg dry wt	-	< 0.009	< 0.009	-	-
Vinclozolin	mg/kg dry wt	-	< 0.009	< 0.009	-	-

Sample Type: Soil						
Sample Name:		MN26059 01-Mar-2026	MN26060 01-Mar-2026	MN26062 01-Mar-2026	MN26064 01-Mar-2026	MN26065 01-Mar-2026
Lab Number:		4115941.51	4115941.52	4115941.54	4115941.56	4115941.57
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	-	-	-	< 0.4	< 0.3
1-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
2-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.03	< 0.013
Acenaphthylene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Acenaphthene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Anthracene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Benzo[a]anthracene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	-	0.016	< 0.013
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	-	< 0.033	< 0.031
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	-	< 0.033	< 0.030
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	-	-	-	0.018	< 0.013
Benzo[e]pyrene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Benzo[k]fluoranthene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Chrysene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Fluoranthene	mg/kg dry wt	-	-	-	0.022	0.014
Fluorene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Naphthalene	mg/kg dry wt	-	-	-	< 0.07	< 0.07
Perylene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Phenanthrene	mg/kg dry wt	-	-	-	< 0.014	< 0.013
Pyrene	mg/kg dry wt	-	-	-	0.022	0.014
Sample Name:		MN26066 01-Mar-2026	MN26067 01-Mar-2026	Composite of MN26007, MN26009, MN26011 & MN26013	Composite of MN26008, MN26010, MN26012 & MN26014	Composite of MN26025, MN26027 & MN26029
Lab Number:		4115941.58	4115941.59	4115941.60	4115941.61	4115941.62
Individual Tests						
Dry Matter	g/100g as rcvd	82	83	76	79	74
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	5	5	-	-	-
Total Recoverable Cadmium	mg/kg dry wt	0.29	0.52	-	-	-
Total Recoverable Chromium	mg/kg dry wt	11	14	-	-	-
Total Recoverable Copper	mg/kg dry wt	56	39	-	-	-
Total Recoverable Lead	mg/kg dry wt	183	320	-	-	-
Total Recoverable Nickel	mg/kg dry wt	20	59	-	-	-
Total Recoverable Zinc	mg/kg dry wt	260	410	-	-	-
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Alachlor	mg/kg dry wt	-	-	< 0.006	< 0.006	< 0.05
Aldrin	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Atrazine	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Atrazine-desethyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Atrazine-desisopropyl	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Azaconazole	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Azinphos-methyl	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.19
Benalaxyl	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Bendiocarb	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Benodanil	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
alpha-BHC	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
beta-BHC	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014

Sample Type: Soil						
Sample Name:		MN26066 01-Mar-2026	MN26067 01-Mar-2026	Composite of MN26007, MN26009, MN26011 & MN26013	Composite of MN26008, MN26010, MN26012 & MN26014	Composite of MN26025, MN26027 & MN26029
Lab Number:		4115941.58	4115941.59	4115941.60	4115941.61	4115941.62
Multiresidue Pesticides in Soil samples by GCMS						
delta-BHC	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
gamma-BHC (Lindane)	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Bifenthrin	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Bitertanol	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Bromacil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Bromophos-ethyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Bromopropylate	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Bupirimate	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Buprofezin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Butachlor	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Captafol	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Captan	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Carbaryl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Carbofenthion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Carbofuran	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
cis-Chlordane	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
trans-Chlordane	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Chlorfenvinphos	mg/kg dry wt	-	-	< 0.013	< 0.012	< 0.13
Chlorfluazuron	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Chlorothalonil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Chlorpropham	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Chlorpyrifos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Chlorpyrifos-methyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Chlortoluron	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Chlozolinate	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Coumaphos	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Cyanazine	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Cyfluthrin	mg/kg dry wt	-	-	< 0.011	< 0.011	< 0.12
Cyhalothrin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Cypermethrin	mg/kg dry wt	-	-	< 0.03	< 0.03	< 0.3
Cyproconazole	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Cyprodinil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
2,4'-DDD	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
4,4'-DDD	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
2,4'-DDE	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
4,4'-DDE	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
2,4'-DDT	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
4,4'-DDT	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Total DDT Isomers	mg/kg dry wt	-	-	< 0.08	< 0.08	< 0.09
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Diazinon	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Dichlobenil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Dichlofenthion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Dichlofluanid	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Dichloran	mg/kg dry wt	-	-	< 0.03	< 0.03	< 0.3
Dichlorvos	mg/kg dry wt	-	-	< 0.010	< 0.010	< 0.10
Dicofol	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Dicrotophos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Dieldrin	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Difenoconazole	mg/kg dry wt	-	-	< 0.013	< 0.012	< 0.13
Dimethoate	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Dinocap	mg/kg dry wt	-	-	< 0.10	< 0.10	< 1.1

Sample Type: Soil						
Sample Name:		MN26066 01-Mar-2026	MN26067 01-Mar-2026	Composite of MN26007, MN26009, MN26011 & MN26013	Composite of MN26008, MN26010, MN26012 & MN26014	Composite of MN26025, MN26027 & MN26029
Lab Number:		4115941.58	4115941.59	4115941.60	4115941.61	4115941.62
Multiresidue Pesticides in Soil samples by GCMS						
Diphenylamine	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Diuron	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Endosulfan I	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Endosulfan II	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Endosulfan sulphate	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Endrin	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Endrin aldehyde	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Endrin ketone	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
EPN	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Ethion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Etrimfos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Famphur	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fenarimol	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fenitrothion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fenpropathrin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fenpropimorph	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fensulfothion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	-	-	< 0.013	< 0.012	< 0.13
Fluazifop-butyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fluometuron	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Flusilazole	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Fluvalinate	mg/kg dry wt	-	-	< 0.007	< 0.006	< 0.07
Folpet	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Furalaxyl	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Haloxifop-methyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Heptachlor	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Heptachlor epoxide	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Hexachlorobenzene	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Hexaconazole	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Hexazinone	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Hexythiazox	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Imazalil	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Indoxacarb	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Iodofenphos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
IPBC (3-Iodo-2-propynyl-n- butylcarbamate)	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Isazophos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Isofenphos	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Kresoxim-methyl	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Leptophos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Linuron	mg/kg dry wt	-	-	< 0.3	< 0.3	< 0.10
Malathion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Metalaxyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Methacrifos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Methamidophos	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Methidathion	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Methiocarb	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Methoxychlor	mg/kg dry wt	-	-	< 0.014	< 0.013	< 0.014
Metolachlor	mg/kg dry wt	-	-	< 0.006	< 0.006	< 0.05
Metribuzin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Mevinphos	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Molinate	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19

Sample Type: Soil						
Sample Name:		MN26066 01-Mar-2026	MN26067 01-Mar-2026	Composite of MN26007, MN26009, MN26011 & MN26013	Composite of MN26008, MN26010, MN26012 & MN26014	Composite of MN26025, MN26027 & MN26029
Lab Number:		4115941.58	4115941.59	4115941.60	4115941.61	4115941.62
Multiresidue Pesticides in Soil samples by GCMS						
Myclobutanil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Naled	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Nitrofen	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Nitrothal-isopropyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Norflurazon	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Omethoate	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Oxadiazon	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Oxychlordan	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Oxyfluorfen	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Paclobutrazol	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Parathion-ethyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Parathion-methyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Penconazole	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Pendimethalin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Permethrin	mg/kg dry wt	-	-	< 0.003	< 0.003	< 0.03
Phosmet	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Phosphamidon	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Pirimicarb	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Pirimiphos-methyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Prochloraz	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Procymidone	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Prometryn	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Propachlor	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Propanil	mg/kg dry wt	-	-	< 0.03	< 0.03	< 0.19
Propazine	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Propetamphos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Propham	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Propiconazole	mg/kg dry wt	-	-	< 0.007	< 0.006	< 0.07
Prothiofos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Pyrazophos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Pyrifeno	mg/kg dry wt	-	-	< 0.013	< 0.012	< 0.13
Pyrimethanil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Pyriproxyfen	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Quintozone	mg/kg dry wt	-	-	< 0.018	< 0.017	< 0.19
Quizalofop-ethyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Simazine	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Simetryn	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Sulfentrazone	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Sulfotep	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	-	< 0.3	< 0.3	< 0.19
Tebuconazole	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Tebufenpyrad	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Terbacil	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Terbumeton	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Terbutylazine	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Terbutylazine-desethyl	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Terbutryn	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Tetrachlorvinphos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Thiabendazole	mg/kg dry wt	-	-	< 0.05	< 0.05	< 0.5
Thiobencarb	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Tolylfluanid	mg/kg dry wt	-	-	< 0.005	< 0.005	< 0.05
Triadimefon	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10

Sample Type: Soil						
Sample Name:		MN26066 01-Mar-2026	MN26067 01-Mar-2026	Composite of MN26007, MN26009, MN26011 & MN26013	Composite of MN26008, MN26010, MN26012 & MN26014	Composite of MN26025, MN26027 & MN26029
Lab Number:		4115941.58	4115941.59	4115941.60	4115941.61	4115941.62
Multiresidue Pesticides in Soil samples by GCMS						
Triazophos	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Trifluralin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Vinclozolin	mg/kg dry wt	-	-	< 0.009	< 0.009	< 0.10
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.3	< 0.3	-	-	-
1-Methylnaphthalene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
2-Methylnaphthalene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Acenaphthylene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Acenaphthene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Anthracene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Benzo[a]anthracene	mg/kg dry wt	< 0.012	0.015	-	-	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.015	0.020	-	-	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.029	0.035	-	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.029	0.035	-	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	0.024	0.029	-	-	-
Benzo[e]pyrene	mg/kg dry wt	0.012	0.015	-	-	-
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.012	0.019	-	-	-
Benzo[k]fluoranthene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Chrysene	mg/kg dry wt	0.015	0.016	-	-	-
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Fluoranthene	mg/kg dry wt	0.025	0.035	-	-	-
Fluorene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	0.014	0.023	-	-	-
Naphthalene	mg/kg dry wt	< 0.06	< 0.06	-	-	-
Perylene	mg/kg dry wt	< 0.012	< 0.012	-	-	-
Phenanthrene	mg/kg dry wt	< 0.012	0.020	-	-	-
Pyrene	mg/kg dry wt	0.024	0.037	-	-	-
Sample Name:		Composite of MN26026, MN26028 & MN26030	Composite of MN26031, MN26034 & MN26036	Composite of MN26033, MN26035 & MN26037	Composite of MN26040, MN26042 & MN26044	Composite of MN26041, MN26043 & MN26046
Lab Number:		4115941.63	4115941.64	4115941.65	4115941.66	4115941.67
Individual Tests						
Dry Matter	g/100g as rcvd	73	71	70	63	65
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Alachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Aldrin	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Atrazine	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Atrazine-desethyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Atrazine-desisopropyl	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Azaconazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Azinphos-methyl	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Benalaxyl	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Bendiocarb	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Benodanil	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
alpha-BHC	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
beta-BHC	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
delta-BHC	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
gamma-BHC (Lindane)	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Bifenthrin	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06

Sample Type: Soil						
Sample Name:		Composite of MN26026, MN26028 & MN26030	Composite of MN26031, MN26034 & MN26036	Composite of MN26033, MN26035 & MN26037	Composite of MN26040, MN26042 & MN26044	Composite of MN26041, MN26043 & MN26046
Lab Number:		4115941.63	4115941.64	4115941.65	4115941.66	4115941.67
Multiresidue Pesticides in Soil samples by GCMS						
Bitertanol	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Bromacil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Bromophos-ethyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Bromopropylate	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Bupirimate	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Buprofezin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Butachlor	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Captafol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Captan	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Carbaryl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Carbofenothion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Carbofuran	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
cis-Chlordane	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
trans-Chlordane	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Chlorfenvinphos	mg/kg dry wt	< 0.13	< 0.14	< 0.14	< 0.16	< 0.15
Chlorfluazuron	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Chlorothalonil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Chlorpropham	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Chlorpyrifos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Chlorpyrifos-methyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Chlortoluron	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Chlozolinate	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Coumaphos	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Cyanazine	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Cyfluthrin	mg/kg dry wt	< 0.12	< 0.12	< 0.12	< 0.13	< 0.13
Cyhalothrin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Cypermethrin	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Cyproconazole	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Cyprodinil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
2,4'-DDD	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
4,4'-DDD	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
2,4'-DDE	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
4,4'-DDE	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
2,4'-DDT	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
4,4'-DDT	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.09	< 0.09	< 0.10	< 0.09
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Diazinon	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Dichlobenil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Dichlofenthion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Dichlofluanid	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Dichloran	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dichlorvos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Dicofol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Dicrotophos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Dieldrin	mg/kg dry wt	< 0.014	< 0.014	< 0.015	0.108	0.019
Difenoconazole	mg/kg dry wt	< 0.13	< 0.14	< 0.14	< 0.16	< 0.15
Dimethoate	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Dinocap	mg/kg dry wt	< 1.1	< 1.1	< 1.1	< 1.2	< 1.2
Diphenylamine	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Diuron	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Endosulfan I	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Endosulfan II	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015

Sample Type: Soil						
Sample Name:		Composite of MN26026, MN26028 & MN26030	Composite of MN26031, MN26034 & MN26036	Composite of MN26033, MN26035 & MN26037	Composite of MN26040, MN26042 & MN26044	Composite of MN26041, MN26043 & MN26046
Lab Number:		4115941.63	4115941.64	4115941.65	4115941.66	4115941.67
Multiresidue Pesticides in Soil samples by GCMS						
Endosulfan sulphate	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Endrin	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Endrin aldehyde	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Endrin ketone	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
EPN	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Ethion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Etrimfos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Famphur	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fenarimol	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fenitrothion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fenpropathrin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fenpropimorph	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fensulfothion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.13	< 0.14	< 0.14	< 0.16	< 0.15
Fluazifop-butyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fluometuron	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Flusilazole	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Fluvalinate	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.08	< 0.08
Folpet	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Furalaxyl	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Haloxifop-methyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Heptachlor	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Heptachlor epoxide	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Hexachlorobenzene	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Hexaconazole	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Hexazinone	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Hexythiazox	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Imazalil	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Indoxacarb	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Iodofenphos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
IPBC (3-Iodo-2-propynyl-n- butylcarbamate)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Isazophos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Isofenphos	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Kresoxim-methyl	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Leptophos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Linuron	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Malathion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Metalaxyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Methacrifos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Methamidophos	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Methidathion	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Methiocarb	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Methoxychlor	mg/kg dry wt	< 0.014	< 0.014	< 0.015	< 0.016	< 0.015
Metolachlor	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Metribuzin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Mevinphos	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Molinate	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Myclobutanil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Naled	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Nitrofen	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Nitrothal-isopropyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Norflurazon	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3

Sample Type: Soil						
Sample Name:		Composite of MN26026, MN26028 & MN26030	Composite of MN26031, MN26034 & MN26036	Composite of MN26033, MN26035 & MN26037	Composite of MN26040, MN26042 & MN26044	Composite of MN26041, MN26043 & MN26046
Lab Number:		4115941.63	4115941.64	4115941.65	4115941.66	4115941.67
Multiresidue Pesticides in Soil samples by GCMS						
Omethoate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Oxadiazon	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Oxychlorane	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Oxyfluorfen	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Paclobutrazol	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Parathion-ethyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Parathion-methyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Penconazole	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Pendimethalin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.04	< 0.03
Phosmet	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Phosphamidon	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Pirimicarb	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Pirimiphos-methyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Prochloraz	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Procymidone	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Prometryn	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Propachlor	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Propanil	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Propazine	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Propetamphos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Propham	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Propiconazole	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.08	< 0.08
Prothiofos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Pyrazophos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Pyrifeno	mg/kg dry wt	< 0.13	< 0.14	< 0.14	< 0.16	< 0.15
Pyrimethanil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Pyriproxyfen	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Quintozone	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Quizalofop-ethyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Simazine	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Simetryn	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Sulfentrazone	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Sulfotep	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.19	< 0.19	< 0.2	< 0.3	< 0.3
Tebuconazole	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Tebufenpyrad	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Terbacil	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Terbumeton	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Terbutylazine	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Terbutylazine-desethyl	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Terbutryn	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Tetrachlorvinphos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Thiabendazole	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.6	< 0.6
Thiobencarb	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Tolyfluanid	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.06	< 0.06
Triadimefon	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Triazophos	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Trifluralin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Vinclozolin	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11

Sample Type: Soil					
Sample Name:		Composite of MN26047, MN26049 & MN26051	Composite of MN26048, MN26050 & MN26052	Composite of MN26053, MN26055 & MN26058	Composite of MN26054, MN26056 & MN26059
Lab Number:		4115941.68	4115941.69	4115941.70	4115941.71
Individual Tests					
Dry Matter	g/100g as rcvd	64	65	72	70
Multiresidue Pesticides in Soil samples by GCMS					
Acetochlor	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Alachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Aldrin	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Atrazine	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Atrazine-desethyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Atrazine-desisopropyl	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Azaconazole	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Azinphos-methyl	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Benalaxyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Bendiocarb	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Benodanil	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
alpha-BHC	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
beta-BHC	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
delta-BHC	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
gamma-BHC (Lindane)	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Bifenthrin	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Bitertanol	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Bromacil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Bromophos-ethyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Bromopropylate	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Bupirimate	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Buprofezin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Butachlor	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Captafol	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Captan	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Carbaryl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Carbofenothion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Carbofuran	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
cis-Chlordane	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
trans-Chlordane	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Chlorfenvinphos	mg/kg dry wt	< 0.15	< 0.15	< 0.14	< 0.14
Chlorfluazuron	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Chlorothalonil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Chlorpropham	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Chlorpyrifos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Chlorpyrifos-methyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Chlortoluron	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Chlozolinat	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Coumaphos	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Cyanazine	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Cyfluthrin	mg/kg dry wt	< 0.13	< 0.13	< 0.12	< 0.12
Cyhalothrin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Cypermethrin	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3
Cyproconazole	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Cyprodinil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
2,4'-DDD	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
4,4'-DDD	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
2,4'-DDE	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
4,4'-DDE	mg/kg dry wt	0.016	< 0.015	< 0.014	< 0.014
2,4'-DDT	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
4,4'-DDT	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Total DDT Isomers	mg/kg dry wt	< 0.10	< 0.09	< 0.09	< 0.09

Sample Type: Soil					
Sample Name:		Composite of MN26047, MN26049 & MN26051	Composite of MN26048, MN26050 & MN26052	Composite of MN26053, MN26055 & MN26058	Composite of MN26054, MN26056 & MN26059
Lab Number:		4115941.68	4115941.69	4115941.70	4115941.71
Multiresidue Pesticides in Soil samples by GCMS					
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Diazinon	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Dichlobenil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Dichlofenthion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Dichlofluanid	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Dichloran	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3
Dichlorvos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Dicofol	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Dicrotophos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Dieldrin	mg/kg dry wt	0.060	< 0.015	0.055	< 0.014
Difenoconazole	mg/kg dry wt	< 0.15	< 0.15	< 0.14	< 0.14
Dimethoate	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Dinocap	mg/kg dry wt	< 1.2	< 1.2	< 1.1	< 1.1
Diphenylamine	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Diuron	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Endosulfan I	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Endosulfan II	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Endosulfan sulphate	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Endrin	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Endrin aldehyde	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Endrin ketone	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
EPN	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Ethion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Etrimfos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Famphur	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fenarimol	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fenitrothion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fenpropathrin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fenpropimorph	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fensulfothion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.15	< 0.15	< 0.14	< 0.14
Fluazifop-butyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fluometuron	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Flusilazole	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Fluvalinate	mg/kg dry wt	< 0.08	< 0.08	< 0.07	< 0.07
Folpet	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Furalaxyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Haloxifop-methyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Heptachlor	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Heptachlor epoxide	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Hexachlorobenzene	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Hexaconazole	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Hexazinone	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Hexythiazox	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Imazalil	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Indoxacarb	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Iodofenphos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
IPBC (3-Iodo-2-propynyl-n- butylcarbamate)	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Isazophos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Isofenphos	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Kresoxim-methyl	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Leptophos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10

Sample Type: Soil					
Sample Name:		Composite of MN26047, MN26049 & MN26051	Composite of MN26048, MN26050 & MN26052	Composite of MN26053, MN26055 & MN26058	Composite of MN26054, MN26056 & MN26059
Lab Number:		4115941.68	4115941.69	4115941.70	4115941.71
Multiresidue Pesticides in Soil samples by GCMS					
Linuron	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Malathion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Metalaxyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Methacrifos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Methamidophos	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Methidathion	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Methiocarb	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Methoxychlor	mg/kg dry wt	< 0.016	< 0.015	< 0.014	< 0.014
Metolachlor	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Metribuzin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Mevinphos	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Molinate	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Myclobutanil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Naled	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Nitrofen	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Nitrothal-isopropyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Norflurazon	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Omethoate	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Oxadiazon	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Oxychlorane	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Oxyfluorfen	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Paclobutrazol	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Parathion-ethyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Parathion-methyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Penconazole	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Pendimethalin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Permethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03
Phosmet	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Phosphamidon	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Pirimicarb	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Pirimiphos-methyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Prochloraz	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Procymidone	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Prometryn	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Propachlor	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Propanil	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Propazine	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Propetamphos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Propham	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Propiconazole	mg/kg dry wt	< 0.08	< 0.08	< 0.07	< 0.07
Prothiofos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Pyrazophos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Pyrifenoxy	mg/kg dry wt	< 0.15	< 0.15	< 0.14	< 0.14
Pyrimethanil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Pyriproxyfen	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Quintozone	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Quizalofop-ethyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Simazine	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Simetryn	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Sulfentrazone	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Sulfotep	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.3	< 0.3	< 0.19	< 0.2
Tebuconazole	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10

Sample Type: Soil					
Sample Name:		Composite of MN26047, MN26049 & MN26051	Composite of MN26048, MN26050 & MN26052	Composite of MN26053, MN26055 & MN26058	Composite of MN26054, MN26056 & MN26059
Lab Number:		4115941.68	4115941.69	4115941.70	4115941.71
Multiresidue Pesticides in Soil samples by GCMS					
Tebufenpyrad	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Terbacil	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Terbumeton	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Terbuthylazine	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Terbuthylazine-desethyl	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Terbutryn	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Tetrachlorvinphos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Thiabendazole	mg/kg dry wt	< 0.6	< 0.6	< 0.5	< 0.5
Thiobencarb	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Tolylfluanid	mg/kg dry wt	< 0.06	< 0.06	< 0.05	< 0.05
Triadimefon	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Triazophos	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Trifluralin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10
Vinclozolin	mg/kg dry wt	< 0.11	< 0.11	< 0.10	< 0.10

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-52, 54, 56-59
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	13-15, 56-59
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-52, 54, 56-59
Multiresidue Pesticides in Soil samples by GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.003 - 0.06 mg/kg dry wt	9-15, 30-31, 52, 54, 60-71
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	13-15, 56-59
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	9-15, 30-31, 52, 54, 56-71
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-8, 17-23, 25-29, 32-36, 38-48, 50-51
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	13-15, 56-59
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	13-15, 56-59

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 02-Mar-2026 and 10-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Ara Heron BSc (Tech)
Client Services Manager - Environmental



Certificate of Analysis

Page 1 of 2

Client:	Groundwater & Environmental Services	Lab No:	4116458	A2Pv1
Contact:	Mr A MacDonald C/- Groundwater & Environmental Services PO Box 190 Cambridge 3450	Date Received:	02-Mar-2026	
		Date Reported:	06-Mar-2026	
		Quote No:	82855	
		Order No:		
		Client Reference:	MILLDALE NORTH	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil				
Sample Name:		MN26022 01-Mar-2026	MN26023 01-Mar-2026	MN26024 01-Mar-2026
Lab Number:		4116458.1	4116458.2	4116458.3
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form		-	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001
As Received Weight	g	599.2	718.2	615.3
Dry Weight	g	468.9	555.7	507.2
Moisture*	%	22	23	18
Sample Fraction >10mm	g dry wt	< 0.1	168.4	83.1
Sample Fraction <10mm to >2mm	g dry wt	104.5	160.8	193.0
Sample Fraction <2mm	g dry wt	363.2	225.6	230.2
<2mm Subsample Weight	g dry wt	51.4	51.4	52.0
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
 - Trace - Trace levels of asbestos, as defined by AS4964-2004.
- For further details, please contact the Asbestos Team.

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.**
<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-3
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-3
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-3
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-3
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-3
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-3
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-3
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-3
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-3
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-3
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-3
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-3
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-3
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-3
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-3

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 06-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



John Keneth Paglingayan BAPSc
Laboratory Technician - Asbestos



Certificate of Analysis

Page 1 of 10

Client:	Groundwater & Environmental Services	Lab No:	4120931	SPV1
Contact:	Mr A MacDonald	Date Received:	05-Mar-2026	
	C/- Groundwater & Environmental Services	Date Reported:	16-Mar-2026	
	PO Box 190	Quote No:	82855	
	Cambridge 3450	Order No:		
		Client Reference:	Milldale North	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil

Sample Name:	MN26068	MN26069	MN26070	MN26071	MN26072
	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026
Lab Number:	4120931.1	4120931.2	4120931.3	4120931.4	4120931.5

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.16	< 0.10	0.24	< 0.10	0.28
Total Recoverable Chromium	mg/kg dry wt	6	4	6	7	8
Total Recoverable Copper	mg/kg dry wt	3	4	5	9	6
Total Recoverable Lead	mg/kg dry wt	6.7	5.8	7.1	7.0	6.7
Total Recoverable Nickel	mg/kg dry wt	2	< 2	< 2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	< 4	< 4	< 4	11

Sample Name:	MN26073	MN26074	MN26075	MN26076	MN26077
	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026
Lab Number:	4120931.6	4120931.7	4120931.8	4120931.9	4120931.10

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.10	0.26	< 0.10	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	8	7	4	7	9
Total Recoverable Copper	mg/kg dry wt	3	5	3	9	11
Total Recoverable Lead	mg/kg dry wt	4.7	7.9	3.6	9.0	9.9
Total Recoverable Nickel	mg/kg dry wt	2	3	< 2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	11	< 4	< 4	< 4

Sample Name:	MN26078	MN26079	MN26080	MN26081	MN26082
	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026
Lab Number:	4120931.11	4120931.12	4120931.13	4120931.14	4120931.15

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.36	< 0.10	0.34	< 0.10
Total Recoverable Chromium	mg/kg dry wt	9	8	12	9	7
Total Recoverable Copper	mg/kg dry wt	11	9	12	12	11
Total Recoverable Lead	mg/kg dry wt	11.0	11.2	12.0	9.2	8.3
Total Recoverable Nickel	mg/kg dry wt	< 2	< 2	2	< 2	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	8	< 4	6	< 4

Sample Name:	MN26083	MN26084	MN26085	MN26086	MN26087
	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026	04-Mar-2026
Lab Number:	4120931.16	4120931.17	4120931.18	4120931.19	4120931.20

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.33	< 0.10	0.37	< 0.10	0.47
Total Recoverable Chromium	mg/kg dry wt	7	6	10	7	10
Total Recoverable Copper	mg/kg dry wt	11	9	20	13	13

Sample Type: Soil						
Sample Name:		MN26083 04-Mar-2026	MN26084 04-Mar-2026	MN26085 04-Mar-2026	MN26086 04-Mar-2026	MN26087 04-Mar-2026
Lab Number:		4120931.16	4120931.17	4120931.18	4120931.19	4120931.20
Heavy Metals, Screen Level						
Total Recoverable Lead	mg/kg dry wt	8.4	6.9	13.1	10.2	10.9
Total Recoverable Nickel	mg/kg dry wt	2	< 2	2	< 2	2
Total Recoverable Zinc	mg/kg dry wt	6	< 4	10	< 4	12
Sample Name:		MN26088 04-Mar-2026	MN26089 04-Mar-2026	MN26090 04-Mar-2026	MN26091 04-Mar-2026	MN26092 04-Mar-2026
Lab Number:		4120931.21	4120931.22	4120931.23	4120931.24	4120931.25
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	< 2	< 2	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	0.46	< 0.10	0.24	< 0.10	0.23
Total Recoverable Chromium	mg/kg dry wt	10	6	5	12	8
Total Recoverable Copper	mg/kg dry wt	13	10	12	8	9
Total Recoverable Lead	mg/kg dry wt	11.2	9.0	9.2	8.3	10.3
Total Recoverable Nickel	mg/kg dry wt	2	< 2	< 2	4	< 2
Total Recoverable Zinc	mg/kg dry wt	11	< 4	5	< 4	6
Sample Name:		MN26093 04-Mar-2026	MN26094 04-Mar-2026	MN26095 04-Mar-2026	MN26096 04-Mar-2026	MN26097 04-Mar-2026
Lab Number:		4120931.26	4120931.27	4120931.28	4120931.29	4120931.30
Individual Tests						
Dry Matter	g/100g as rcvd	-	-	60	-	60
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	2	3	3	< 2	< 2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.60	< 0.10	0.43	< 0.10
Total Recoverable Chromium	mg/kg dry wt	9	15	11	10	8
Total Recoverable Copper	mg/kg dry wt	14	21	15	17	15
Total Recoverable Lead	mg/kg dry wt	12.3	17.4	15.4	11.3	12.4
Total Recoverable Nickel	mg/kg dry wt	< 2	3	< 2	2	< 2
Total Recoverable Zinc	mg/kg dry wt	< 4	15	< 4	8	< 4
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	-	-	< 0.4	-	< 0.4
1-Methylnaphthalene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
2-Methylnaphthalene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Acenaphthylene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Acenaphthene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Anthracene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Benzo[a]anthracene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	< 0.040	-	< 0.041
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	< 0.040	-	< 0.040
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Benzo[e]pyrene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Benzo[k]fluoranthene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Chrysene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Fluoranthene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Fluorene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Naphthalene	mg/kg dry wt	-	-	< 0.09	-	< 0.09
Perylene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Phenanthrene	mg/kg dry wt	-	-	< 0.017	-	< 0.017
Pyrene	mg/kg dry wt	-	-	< 0.017	-	< 0.017

Sample Type: Soil						
Sample Name:		Composite of MN26068, MN26070 & MN26072 04-Mar-2026	Composite of MN26069, MN26071 & MN26073 04-Mar-2026	Composite of MN26074 & MN26076 04-Mar-2026	Composite of MN26075 & MN26078 04-Mar-2026	Composite of MN26079, MN26081 & MN26083 04-Mar-2026
Lab Number:		4120931.31	4120931.32	4120931.33	4120931.34	4120931.35
Individual Tests						
Dry Matter	g/100g as rcvd	67	68	62	61	60
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Alachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Aldrin	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Atrazine	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Atrazine-desethyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Atrazine-desisopropyl	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Azaconazole	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Azinphos-methyl	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Benalaxyl	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Bendiocarb	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Benodanil	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
alpha-BHC	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
beta-BHC	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
delta-BHC	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
gamma-BHC (Lindane)	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Bifenthrin	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Bitertanol	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Bromacil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Bromophos-ethyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Bromopropylate	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Bupirimate	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Buprofezin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Butachlor	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Captafol	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Captan	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Carbaryl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Carbofenothion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Carbofuran	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
cis-Chlordane	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
trans-Chlordane	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Chlorfenvinphos	mg/kg dry wt	< 0.015	< 0.014	< 0.016	< 0.016	< 0.016
Chlorfluazuron	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Chlorothalonil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Chlorpropham	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Chlorpyrifos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Chlorpyrifos-methyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Chlortoluron	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Chlozolinate	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Coumaphos	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Cyanazine	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Cyfluthrin	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.014	< 0.014
Cyhalothrin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Cypermethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Cyproconazole	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Cyprodinil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
2,4'-DDD	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
4,4'-DDD	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
2,4'-DDE	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
4,4'-DDE	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
2,4'-DDT	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017

Sample Type: Soil						
Sample Name:		Composite of MN26068, MN26070 & MN26072 04-Mar-2026	Composite of MN26069, MN26071 & MN26073 04-Mar-2026	Composite of MN26074 & MN26076 04-Mar-2026	Composite of MN26075 & MN26078 04-Mar-2026	Composite of MN26079, MN26081 & MN26083 04-Mar-2026
Lab Number:		4120931.31	4120931.32	4120931.33	4120931.34	4120931.35
Multiresidue Pesticides in Soil samples by GCMS						
4,4'-DDT	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Total DDT Isomers	mg/kg dry wt	< 0.09	< 0.09	< 0.10	< 0.10	< 0.10
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Diazinon	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Dichlobenil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Dichlofenthion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Dichlofluanid	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Dichloran	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlorvos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Dicofol	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Dicrotophos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Dieldrin	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Difenoconazole	mg/kg dry wt	< 0.015	< 0.014	< 0.016	< 0.016	< 0.016
Dimethoate	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Dinocap	mg/kg dry wt	< 0.12	< 0.11	< 0.13	< 0.13	< 0.13
Diphenylamine	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Diuron	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Endosulfan I	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Endosulfan II	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Endosulfan sulphate	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Endrin	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Endrin aldehyde	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Endrin ketone	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
EPN	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Ethion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Etrimfos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Famphur	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fenarimol	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fenitrothion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fenpropathrin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fenpropimorph	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fensulfothion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.015	< 0.014	< 0.016	< 0.016	< 0.016
Fluazifop-butyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fluometuron	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Flusilazole	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Fluvalinate	mg/kg dry wt	< 0.008	< 0.007	< 0.008	< 0.008	< 0.008
Folpet	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Furalaxyl	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Haloxypop-methyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Heptachlor	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Heptachlor epoxide	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Hexachlorobenzene	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Hexaconazole	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Hexazinone	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Hexythiazox	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Imazalil	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Indoxacarb	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Iodofenphos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
IPBC (3-Iodo-2-propynyl-n- butylcarbamate)	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06

Sample Type: Soil						
Sample Name:		Composite of MN26068, MN26070 & MN26072 04-Mar-2026	Composite of MN26069, MN26071 & MN26073 04-Mar-2026	Composite of MN26074 & MN26076 04-Mar-2026	Composite of MN26075 & MN26078 04-Mar-2026	Composite of MN26079, MN26081 & MN26083 04-Mar-2026
Lab Number:		4120931.31	4120931.32	4120931.33	4120931.34	4120931.35
Multiresidue Pesticides in Soil samples by GCMS						
Isazophos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Isofenphos	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Kresoxim-methyl	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Leptophos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Linuron	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Malathion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Metalaxyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Methacrifos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Methamidophos	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Methidathion	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Methiocarb	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Methoxychlor	mg/kg dry wt	< 0.015	< 0.015	< 0.017	< 0.017	< 0.017
Metolachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Metribuzin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Mevinphos	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Molinate	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Myclobutanil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Naled	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Nitrofen	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Nitrothal-isopropyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Norflurazon	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Omethoate	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Oxadiazon	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Oxychlorane	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Oxyfluorfen	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Paclobutrazol	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Parathion-ethyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Parathion-methyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Penconazole	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Pendimethalin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Permethrin	mg/kg dry wt	< 0.003	< 0.003	< 0.004	< 0.004	< 0.004
Phosmet	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Phosphamidon	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Pirimicarb	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Pirimiphos-methyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Prochloraz	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Procymidone	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Prometryn	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Propachlor	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Propanil	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propazine	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Propetamphos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Propham	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Propiconazole	mg/kg dry wt	< 0.008	< 0.007	< 0.008	< 0.008	< 0.008
Prothiofos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Pyrazophos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Pyrifenox	mg/kg dry wt	< 0.015	< 0.014	< 0.016	< 0.016	< 0.016
Pyrimethanil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Pyriproxyfen	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Quintozene	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Quizalofop-ethyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Simazine	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Simetryn	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012

Sample Type: Soil						
Sample Name:		Composite of MN26068, MN26070 & MN26072 04-Mar-2026	Composite of MN26069, MN26071 & MN26073 04-Mar-2026	Composite of MN26074 & MN26076 04-Mar-2026	Composite of MN26075 & MN26078 04-Mar-2026	Composite of MN26079, MN26081 & MN26083 04-Mar-2026
Lab Number:		4120931.31	4120931.32	4120931.33	4120931.34	4120931.35
Multiresidue Pesticides in Soil samples by GCMS						
Sulfentrazone	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Sulfotep	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.03	< 0.02	< 0.03	< 0.03	< 0.03
Tebuconazole	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Tebufenpyrad	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Terbacil	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Terbumeton	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Terbuthylazine	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Terbuthylazine-desethyl	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Terbutryn	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Tetrachlorvinphos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Thiabendazole	mg/kg dry wt	< 0.06	< 0.05	< 0.06	< 0.06	< 0.06
Thiobencarb	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Tolyfluanid	mg/kg dry wt	< 0.006	< 0.005	< 0.006	< 0.006	< 0.006
Triadimefon	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Triazophos	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Trifluralin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Vinclozolin	mg/kg dry wt	< 0.011	< 0.010	< 0.012	< 0.011	< 0.012
Sample Name:		Composite of MN26080, MN26082 & MN26084 04-Mar-2026	Composite of MN26085, MN26087 & MN26090 04-Mar-2026	Composite of MN26086, MN26089 & MN26091 04-Mar-2026	Composite of MN26092, MN26094 & MN26096 04-Mar-2026	Composite of MN26093, MN26095 & MN26097 04-Mar-2026
Lab Number:		4120931.36	4120931.37	4120931.38	4120931.39	4120931.40
Individual Tests						
Dry Matter	g/100g as rcvd	61	64	64	57	58
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Alachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Aldrin	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Atrazine	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Atrazine-desethyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Atrazine-desisopropyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Azaconazole	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Azinphos-methyl	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benalaxyl	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Bendiocarb	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Benodanil	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
alpha-BHC	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
beta-BHC	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
delta-BHC	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
gamma-BHC (Lindane)	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Bifenthrin	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Bitertanol	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Bromacil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Bromophos-ethyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Bromopropylate	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Bupirimate	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Buprofezin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Butachlor	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Captafol	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Captan	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

Sample Type: Soil						
Sample Name:		Composite of MN26080, MN26082 & MN26084 04-Mar-2026	Composite of MN26085, MN26087 & MN26090 04-Mar-2026	Composite of MN26086, MN26089 & MN26091 04-Mar-2026	Composite of MN26092, MN26094 & MN26096 04-Mar-2026	Composite of MN26093, MN26095 & MN26097 04-Mar-2026
Lab Number:		4120931.36	4120931.37	4120931.38	4120931.39	4120931.40
Multiresidue Pesticides in Soil samples by GCMS						
Carbaryl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Carbofenthion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Carbofuran	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
cis-Chlordane	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
trans-Chlordane	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Chlorfenvinphos	mg/kg dry wt	< 0.016	< 0.015	< 0.015	< 0.017	< 0.017
Chlorfluazuron	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Chlorothalonil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Chlorpropham	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chlorpyrifos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Chlorpyrifos-methyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Chlortoluron	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chlozolinate	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Coumaphos	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Cyanazine	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Cyfluthrin	mg/kg dry wt	< 0.014	< 0.013	< 0.013	< 0.015	< 0.015
Cyhalothrin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Cypermethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Cyproconazole	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Cyprodinil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
2,4'-DDD	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
4,4'-DDD	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
2,4'-DDE	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
4,4'-DDE	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
2,4'-DDT	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
4,4'-DDT	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Total DDT Isomers	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.11	< 0.11
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Diazinon	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Dichlobenil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Dichlofenthion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Dichlofluanid	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Dichloran	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlorvos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Dicofol	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Dicrotophos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Dieldrin	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Difenoconazole	mg/kg dry wt	< 0.016	< 0.015	< 0.015	< 0.017	< 0.017
Dimethoate	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dinocap	mg/kg dry wt	< 0.13	< 0.12	< 0.12	< 0.14	< 0.14
Diphenylamine	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Diuron	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Endosulfan I	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Endosulfan II	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Endosulfan sulphate	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Endrin	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Endrin aldehyde	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Endrin ketone	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
EPN	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Ethion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Etrifos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Famphur	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012

Sample Type: Soil						
Sample Name:		Composite of MN26080, MN26082 & MN26084 04-Mar-2026	Composite of MN26085, MN26087 & MN26090 04-Mar-2026	Composite of MN26086, MN26089 & MN26091 04-Mar-2026	Composite of MN26092, MN26094 & MN26096 04-Mar-2026	Composite of MN26093, MN26095 & MN26097 04-Mar-2026
Lab Number:		4120931.36	4120931.37	4120931.38	4120931.39	4120931.40
Multiresidue Pesticides in Soil samples by GCMS						
Fenarimol	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fenitrothion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fenpropathrin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fenpropimorph	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fensulfothion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.016	< 0.015	< 0.015	< 0.017	< 0.017
Fluazifop-butyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fluometuron	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Flusilazole	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Fluvalinate	mg/kg dry wt	< 0.008	< 0.008	< 0.008	< 0.009	< 0.009
Folpet	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Furalaxyl	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Haloxifop-methyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Heptachlor	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Heptachlor epoxide	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Hexachlorobenzene	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Hexaconazole	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Hexazinone	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Hexythiazox	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Imazalil	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Indoxacarb	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Iodofenphos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
IPBC (3-Iodo-2-propynyl-n- butylcarbamate)	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Isazophos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Isofenphos	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Kresoxim-methyl	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Leptophos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Linuron	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Malathion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Metalaxyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Methacrifos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Methamidophos	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Methidathion	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Methiocarb	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Methoxychlor	mg/kg dry wt	< 0.016	< 0.016	< 0.016	< 0.017	< 0.017
Metolachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Metribuzin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Mevinphos	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Molinate	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Myclobutanil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Naled	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Nitrofen	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Nitrothal-isopropyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Norflurazon	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Omethoate	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Oxadiazon	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Oxychlordane	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Oxyfluorfen	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Paclobutrazol	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Parathion-ethyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Parathion-methyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012

Sample Type: Soil						
Sample Name:		Composite of MN26080, MN26082 & MN26084 04-Mar-2026	Composite of MN26085, MN26087 & MN26090 04-Mar-2026	Composite of MN26086, MN26089 & MN26091 04-Mar-2026	Composite of MN26092, MN26094 & MN26096 04-Mar-2026	Composite of MN26093, MN26095 & MN26097 04-Mar-2026
Lab Number:		4120931.36	4120931.37	4120931.38	4120931.39	4120931.40
Multiresidue Pesticides in Soil samples by GCMS						
Penconazole	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Pendimethalin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Permethrin	mg/kg dry wt	< 0.004	< 0.003	< 0.003	< 0.004	< 0.004
Phosmet	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Phosphamidon	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Pirimicarb	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Pirimiphos-methyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Prochloraz	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Procymidone	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Prometryn	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Propachlor	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Propanil	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propazine	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Propetamphos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Propham	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Propiconazole	mg/kg dry wt	< 0.008	< 0.008	< 0.008	< 0.009	< 0.009
Prothiofos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Pyrazophos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
PyrifenoX	mg/kg dry wt	< 0.016	< 0.015	< 0.015	< 0.017	< 0.017
Pyrimethanil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Pyriproxyfen	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Quintozene	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Quizalofop-ethyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Simazine	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Simetryn	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Sulfentrazone	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Sulfotep	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Tebuconazole	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Tebufenpyrad	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Terbacil	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Terbumeton	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Terbuthylazine	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Terbuthylazine-desethyl	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Terbutryn	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Tetrachlorvinphos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Thiabendazole	mg/kg dry wt	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Thiobencarb	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Tolyfluanid	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Triadimefon	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Triazophos	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Trifluralin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012
Vinclozolin	mg/kg dry wt	< 0.012	< 0.011	< 0.011	< 0.012	< 0.012

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-30
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	28, 30
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-30
Multiresidue Pesticides in Soil samples by GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.003 - 0.06 mg/kg dry wt	31-40
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	28, 30
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	28, 30-40
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	1-9, 11-20, 22-30
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	28, 30
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	28, 30

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 06-Mar-2026 and 16-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Kim Harrison MSc
Client Services Manager - Environmental



Certificate of Analysis

Page 1 of 9

Client:	Groundwater & Environmental Services	Lab No:	4123974	SPV1
Contact:	Mr A MacDonald	Date Received:	07-Mar-2026	
	C/- Groundwater & Environmental Services	Date Reported:	13-Mar-2026	
	PO Box 190	Quote No:	82855	
	Cambridge 3450	Order No:		
		Client Reference:	Milldale Worth	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil

Sample Name:	MN26098	MN26099	MN26101	MN26102	MN26104
	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026
Lab Number:	4123974.1	4123974.2	4123974.3	4123974.4	4123974.5

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	5	5	9	3	4
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	0.11	0.13	< 0.10
Total Recoverable Chromium	mg/kg dry wt	8	8	9	7	7
Total Recoverable Copper	mg/kg dry wt	11	5	11	4	22
Total Recoverable Lead	mg/kg dry wt	16.2	22	23	14.4	16.1
Total Recoverable Nickel	mg/kg dry wt	6	2	4	3	4
Total Recoverable Zinc	mg/kg dry wt	98	11	80	15	34

Sample Name:	MN26105	MN26107	MN26108	MN26110	MN26111
	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026
Lab Number:	4123974.6	4123974.7	4123974.8	4123974.9	4123974.10

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	4	10	9	5	5
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.12	< 0.10	0.15	0.14
Total Recoverable Chromium	mg/kg dry wt	8	21	12	7	8
Total Recoverable Copper	mg/kg dry wt	14	340	11	9	12
Total Recoverable Lead	mg/kg dry wt	20	23	18.3	14.7	15.3
Total Recoverable Nickel	mg/kg dry wt	2	26	3	3	3
Total Recoverable Zinc	mg/kg dry wt	18	65	9	19	19

Sample Name:	MN26112	MN26114	MN26115	MN26116	MN26117
	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026
Lab Number:	4123974.11	4123974.12	4123974.13	4123974.14	4123974.15

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	2	4	5	4	4
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.23	< 0.10	0.14	< 0.10
Total Recoverable Chromium	mg/kg dry wt	4	8	7	6	6
Total Recoverable Copper	mg/kg dry wt	< 2	7	4	21	7
Total Recoverable Lead	mg/kg dry wt	17.7	13.0	22	9.2	17.7
Total Recoverable Nickel	mg/kg dry wt	< 2	5	< 2	4	< 2
Total Recoverable Zinc	mg/kg dry wt	5	22	8	39	9

Sample Name:	MN26118	MN26119	MN26120	MN26121	MN26122
	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026	06-Mar-2026
Lab Number:	4123974.16	4123974.17	4123974.18	4123974.19	4123974.20

Heavy Metals, Screen Level

Total Recoverable Arsenic	mg/kg dry wt	6	4	4	3	3
Total Recoverable Cadmium	mg/kg dry wt	0.12	< 0.10	0.10	< 0.10	< 0.10
Total Recoverable Chromium	mg/kg dry wt	9	8	5	5	7
Total Recoverable Copper	mg/kg dry wt	19	10	6	6	9

Sample Type: Soil						
Sample Name:		MN26118 06-Mar-2026	MN26119 06-Mar-2026	MN26120 06-Mar-2026	MN26121 06-Mar-2026	MN26122 06-Mar-2026
Lab Number:		4123974.16	4123974.17	4123974.18	4123974.19	4123974.20
Heavy Metals, Screen Level						
Total Recoverable Lead	mg/kg dry wt	10.4	21	7.1	13.3	11.0
Total Recoverable Nickel	mg/kg dry wt	4	2	3	< 2	5
Total Recoverable Zinc	mg/kg dry wt	31	19	15	6	15
Sample Name:		MN26123 06-Mar-2026	MN26124 06-Mar-2026	MN26125 06-Mar-2026	MN26126 06-Mar-2026	MN26127 06-Mar-2026
Lab Number:		4123974.21	4123974.22	4123974.23	4123974.24	4123974.25
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	3	8	2	< 2	2
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	0.14
Total Recoverable Chromium	mg/kg dry wt	7	7	5	3	5
Total Recoverable Copper	mg/kg dry wt	9	7	4	2	6
Total Recoverable Lead	mg/kg dry wt	11.1	17.8	8.9	9.2	6.9
Total Recoverable Nickel	mg/kg dry wt	5	< 2	3	< 2	4
Total Recoverable Zinc	mg/kg dry wt	15	9	7	< 4	11
Sample Name:		MN26128 06-Mar-2026	MN26129 06-Mar-2026	MN26130 06-Mar-2026	MN26131 06-Mar-2026	MN26132 06-Mar-2026
Lab Number:		4123974.26	4123974.27	4123974.28	4123974.29	4123974.30
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	4	2	4	2
Total Recoverable Cadmium	mg/kg dry wt	0.11	0.19	0.14	0.23	0.15
Total Recoverable Chromium	mg/kg dry wt	4	8	6	7	5
Total Recoverable Copper	mg/kg dry wt	3	9	3	7	4
Total Recoverable Lead	mg/kg dry wt	5.2	11.7	9.6	9.3	7.0
Total Recoverable Nickel	mg/kg dry wt	2	6	< 2	2	< 2
Total Recoverable Zinc	mg/kg dry wt	5	22	8	12	6
Sample Name:		Composite of MN26110 & MN26114	Composite of MN26112 & MN26115	Composite of MN26116, MN26118, MN26120 & MN26122	Composite of MN26117, MN26119, MN26121 & MN26124	Composite of MN26125, MN26127, MN26129 & MN26131
Lab Number:		4123974.31	4123974.32	4123974.33	4123974.34	4123974.35
Individual Tests						
Dry Matter	g/100g as rcvd	79	72	77	73	79
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Alachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Aldrin	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Atrazine	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Atrazine-desethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Atrazine-desisopropyl	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Azaconazole	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Azinphos-methyl	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Benalaxyl	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Bendiocarb	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Benodanil	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
alpha-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
beta-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
delta-BHC	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
gamma-BHC (Lindane)	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Bifenthrin	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Bromacil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Bromophos-ethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Bromopropylate	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Bupirimate	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Buprofezin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009

Sample Type: Soil						
Sample Name:		Composite of MN26110 & MN26114	Composite of MN26112 & MN26115	Composite of MN26116, MN26118, MN26120 & MN26122	Composite of MN26117, MN26119, MN26121 & MN26124	Composite of MN26125, MN26127, MN26129 & MN26131
Lab Number:		4123974.31	4123974.32	4123974.33	4123974.34	4123974.35
Multiresidue Pesticides in Soil samples by GCMS						
Butachlor	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Captafol	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Captan	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Carbaryl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Carbofenthion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Carbofuran	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
cis-Chlordane	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
trans-Chlordane	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Chlorfenvinphos	mg/kg dry wt	< 0.012	< 0.013	< 0.012	< 0.013	< 0.012
Chlorfluazuron	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Chlorothalonil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Chlorpropham	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Chlorpyrifos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Chlorpyrifos-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Chlortoluron	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Chlozolinate	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Coumaphos	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Cyanazine	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Cyfluthrin	mg/kg dry wt	< 0.011	< 0.011	< 0.011	< 0.011	< 0.010
Cyhalothrin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Cypermethrin	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.02
Cyproconazole	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Cyprodinil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
2,4'-DDD	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
4,4'-DDD	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
2,4'-DDE	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
4,4'-DDE	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
2,4'-DDT	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
4,4'-DDT	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Total DDT Isomers	mg/kg dry wt	< 0.08	< 0.09	< 0.08	< 0.09	< 0.08
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Diazinon	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dichlobenil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Dichlofenthion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Dichlofluanid	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Dichloran	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dichlorvos	mg/kg dry wt	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Dicofol	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dicrotophos	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Difenoconazole	mg/kg dry wt	< 0.012	< 0.013	< 0.012	< 0.013	< 0.012
Dimethoate	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Dinocap	mg/kg dry wt	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Diphenylamine	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Diuron	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Endosulfan I	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Endosulfan II	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Endosulfan sulphate	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Endrin	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Endrin aldehyde	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Endrin ketone	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
EPN	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009

Sample Type: Soil						
Sample Name:		Composite of MN26110 & MN26114	Composite of MN26112 & MN26115	Composite of MN26116, MN26118, MN26120 & MN26122	Composite of MN26117, MN26119, MN26121 & MN26124	Composite of MN26125, MN26127, MN26129 & MN26131
Lab Number:		4123974.31	4123974.32	4123974.33	4123974.34	4123974.35
Multiresidue Pesticides in Soil samples by GCMS						
Ethion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Etrinfos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Famphur	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fenarimol	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fenitrothion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fenpropathrin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fenpropimorph	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fensulfothion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.012	< 0.013	< 0.012	< 0.013	< 0.012
Fluazifop-butyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fluometuron	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Flusilazole	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Fluvalinate	mg/kg dry wt	< 0.006	< 0.007	< 0.006	< 0.007	< 0.006
Folpet	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Furalaxyl	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Haloxypop-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Heptachlor	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Heptachlor epoxide	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Hexachlorobenzene	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Hexaconazole	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Hexazinone	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hexythiazox	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Imazalil	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indoxacarb	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Iodofenphos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
IPBC (3-Iodo-2-propynyl-n- butylcarbamate)	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isazophos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Isofenphos	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Kresoxim-methyl	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Leptophos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Linuron	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Malathion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Metalaxyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Methacrifos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Methamidophos	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methidathion	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Methiocarb	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Methoxychlor	mg/kg dry wt	< 0.013	< 0.014	< 0.013	< 0.014	< 0.013
Metolachlor	mg/kg dry wt	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
Metribuzin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Mevinphos	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Molinate	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Myclobutanil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Naled	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrofen	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Nitrothal-isopropyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Norflurazon	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Omethoate	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Oxadiazon	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Oxychlor dane	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Oxyfluorfen	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

Sample Type: Soil						
Sample Name:		Composite of MN26110 & MN26114	Composite of MN26112 & MN26115	Composite of MN26116, MN26118, MN26120 & MN26122	Composite of MN26117, MN26119, MN26121 & MN26124	Composite of MN26125, MN26127, MN26129 & MN26131
Lab Number:		4123974.31	4123974.32	4123974.33	4123974.34	4123974.35
Multiresidue Pesticides in Soil samples by GCMS						
Parathion-ethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Parathion-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Penconazole	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Pendimethalin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Permethrin	mg/kg dry wt	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phosmet	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Phosphamidon	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Pirimicarb	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Pirimiphos-methyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Prochloraz	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Procymidone	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Prometryn	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Propachlor	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Propanil	mg/kg dry wt	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Propazine	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Propetamphos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Propham	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Propiconazole	mg/kg dry wt	< 0.006	< 0.007	< 0.006	< 0.007	< 0.006
Prothiofos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Pyrazophos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
PyrifenoX	mg/kg dry wt	< 0.012	< 0.013	< 0.012	< 0.013	< 0.012
Pyrimethanil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Pyriproxyfen	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Quintozene	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Quizalofop-ethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Simazine	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Simetryn	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Sulfentrazone	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Sulfotep	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
TCMTB [2-(thiocyanomethylthio) benzothiazole,Busan]	mg/kg dry wt	< 0.017	< 0.018	< 0.017	< 0.018	< 0.017
Tebuconazole	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Tebufenpyrad	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Terbacil	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Terbumeton	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Terbuthylazine	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Terbuthylazine-desethyl	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Terbutryn	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Tetrachlorvinphos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Thiabendazole	mg/kg dry wt	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Thiobencarb	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Tolyfluanid	mg/kg dry wt	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Triadimefon	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Triazophos	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Trifluralin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Vinclozolin	mg/kg dry wt	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Sample Name:		Composite of MN26126, MN26128, MN26130 & MN26132				
Lab Number:		4123974.36				
Individual Tests						
Dry Matter	g/100g as rcvd	80				

Sample Type: Soil		
Sample Name:		Composite of MN26126, MN26128, MN26130 & MN26132
Lab Number:		4123974.36
Multiresidue Pesticides in Soil samples by GCMS		
Acetochlor	mg/kg dry wt	< 0.009
Alachlor	mg/kg dry wt	< 0.006
Aldrin	mg/kg dry wt	< 0.012
Atrazine	mg/kg dry wt	< 0.009
Atrazine-desethyl	mg/kg dry wt	< 0.009
Atrazine-desisopropyl	mg/kg dry wt	< 0.017
Azaconazole	mg/kg dry wt	< 0.005
Azinphos-methyl	mg/kg dry wt	< 0.017
Benalaxyl	mg/kg dry wt	< 0.005
Bendiocarb	mg/kg dry wt	< 0.009
Benodanil	mg/kg dry wt	< 0.017
alpha-BHC	mg/kg dry wt	< 0.012
beta-BHC	mg/kg dry wt	< 0.012
delta-BHC	mg/kg dry wt	< 0.012
gamma-BHC (Lindane)	mg/kg dry wt	< 0.012
Bifenthrin	mg/kg dry wt	< 0.005
Bromacil	mg/kg dry wt	< 0.009
Bromophos-ethyl	mg/kg dry wt	< 0.009
Bromopropylate	mg/kg dry wt	< 0.009
Bupirimate	mg/kg dry wt	< 0.009
Buprofezin	mg/kg dry wt	< 0.009
Butachlor	mg/kg dry wt	< 0.009
Captafol	mg/kg dry wt	< 0.05
Captan	mg/kg dry wt	< 0.017
Carbaryl	mg/kg dry wt	< 0.009
Carbofenothion	mg/kg dry wt	< 0.009
Carbofuran	mg/kg dry wt	< 0.009
cis-Chlordane	mg/kg dry wt	< 0.012
trans-Chlordane	mg/kg dry wt	< 0.012
Chlorfenvinphos	mg/kg dry wt	< 0.012
Chlorfluazuron	mg/kg dry wt	< 0.009
Chlorothalonil	mg/kg dry wt	< 0.009
Chlorpropham	mg/kg dry wt	< 0.017
Chlorpyrifos	mg/kg dry wt	< 0.009
Chlorpyrifos-methyl	mg/kg dry wt	< 0.009
Chlortoluron	mg/kg dry wt	< 0.017
Chlozolinate	mg/kg dry wt	< 0.009
Coumaphos	mg/kg dry wt	< 0.017
Cyanazine	mg/kg dry wt	< 0.009
Cyfluthrin	mg/kg dry wt	< 0.010
Cyhalothrin	mg/kg dry wt	< 0.009
Cypermethrin	mg/kg dry wt	< 0.02
Cyproconazole	mg/kg dry wt	< 0.017
Cyprodinil	mg/kg dry wt	< 0.009
2,4'-DDD	mg/kg dry wt	< 0.012
4,4'-DDD	mg/kg dry wt	< 0.012
2,4'-DDE	mg/kg dry wt	< 0.012
4,4'-DDE	mg/kg dry wt	< 0.012
2,4'-DDT	mg/kg dry wt	< 0.012
4,4'-DDT	mg/kg dry wt	< 0.012
Total DDT Isomers	mg/kg dry wt	< 0.08
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.009
Diazinon	mg/kg dry wt	< 0.005
Dichlobenil	mg/kg dry wt	< 0.009
Dichlofenthion	mg/kg dry wt	< 0.009

Sample Type: Soil		
Sample Name:		Composite of MN26126, MN26128, MN26130 & MN26132
Lab Number:		4123974.36
Multiresidue Pesticides in Soil samples by GCMS		
Dichlofluanid	mg/kg dry wt	< 0.009
Dichloran	mg/kg dry wt	< 0.03
Dichlorvos	mg/kg dry wt	< 0.010
Dicofol	mg/kg dry wt	< 0.05
Dicrotophos	mg/kg dry wt	< 0.05
Dieldrin	mg/kg dry wt	< 0.012
Difenoconazole	mg/kg dry wt	< 0.012
Dimethoate	mg/kg dry wt	< 0.017
Dinocap	mg/kg dry wt	< 0.10
Diphenylamine	mg/kg dry wt	< 0.017
Diuron	mg/kg dry wt	< 0.009
Endosulfan I	mg/kg dry wt	< 0.012
Endosulfan II	mg/kg dry wt	< 0.012
Endosulfan sulphate	mg/kg dry wt	< 0.012
Endrin	mg/kg dry wt	< 0.012
Endrin aldehyde	mg/kg dry wt	< 0.012
Endrin ketone	mg/kg dry wt	< 0.012
EPN	mg/kg dry wt	< 0.009
Ethion	mg/kg dry wt	< 0.009
Etrimfos	mg/kg dry wt	< 0.009
Famphur	mg/kg dry wt	< 0.009
Fenarimol	mg/kg dry wt	< 0.009
Fenitrothion	mg/kg dry wt	< 0.009
Fenpropathrin	mg/kg dry wt	< 0.009
Fenpropimorph	mg/kg dry wt	< 0.009
Fensulfothion	mg/kg dry wt	< 0.009
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.012
Fluazifop-butyl	mg/kg dry wt	< 0.009
Fluometuron	mg/kg dry wt	< 0.009
Flusilazole	mg/kg dry wt	< 0.009
Fluvalinate	mg/kg dry wt	< 0.006
Folpet	mg/kg dry wt	< 0.017
Furalaxyl	mg/kg dry wt	< 0.005
Haloxifop-methyl	mg/kg dry wt	< 0.009
Heptachlor	mg/kg dry wt	< 0.012
Heptachlor epoxide	mg/kg dry wt	< 0.012
Hexachlorobenzene	mg/kg dry wt	< 0.012
Hexaconazole	mg/kg dry wt	< 0.009
Hexazinone	mg/kg dry wt	< 0.005
Hexythiazox	mg/kg dry wt	< 0.05
Imazalil	mg/kg dry wt	< 0.05
Indoxacarb	mg/kg dry wt	< 0.009
Iodofenphos	mg/kg dry wt	< 0.009
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.05
Isazophos	mg/kg dry wt	< 0.009
Isofenphos	mg/kg dry wt	< 0.005
Kresoxim-methyl	mg/kg dry wt	< 0.005
Leptophos	mg/kg dry wt	< 0.009
Linuron	mg/kg dry wt	< 0.05
Malathion	mg/kg dry wt	< 0.009
Metalaxyl	mg/kg dry wt	< 0.009
Methacrifos	mg/kg dry wt	< 0.009
Methamidophos	mg/kg dry wt	< 0.05
Methidathion	mg/kg dry wt	< 0.009

Sample Type: Soil		
Sample Name:		Composite of MN26126, MN26128, MN26130 & MN26132
Lab Number:		4123974.36
Multiresidue Pesticides in Soil samples by GCMS		
Methiocarb	mg/kg dry wt	< 0.009
Methoxychlor	mg/kg dry wt	< 0.012
Metolachlor	mg/kg dry wt	< 0.006
Metribuzin	mg/kg dry wt	< 0.009
Mevinphos	mg/kg dry wt	< 0.017
Molinate	mg/kg dry wt	< 0.017
Myclobutanil	mg/kg dry wt	< 0.009
Naled	mg/kg dry wt	< 0.05
Nitrofen	mg/kg dry wt	< 0.017
Nitrothal-isopropyl	mg/kg dry wt	< 0.009
Norflurazon	mg/kg dry wt	< 0.017
Omethoate	mg/kg dry wt	< 0.05
Oxadiazon	mg/kg dry wt	< 0.009
Oxychlordane	mg/kg dry wt	< 0.005
Oxyfluorfen	mg/kg dry wt	< 0.005
Parathion-ethyl	mg/kg dry wt	< 0.009
Parathion-methyl	mg/kg dry wt	< 0.009
Penconazole	mg/kg dry wt	< 0.009
Pendimethalin	mg/kg dry wt	< 0.009
Permethrin	mg/kg dry wt	< 0.003
Phosmet	mg/kg dry wt	< 0.009
Phosphamidon	mg/kg dry wt	< 0.009
Pirimicarb	mg/kg dry wt	< 0.009
Pirimiphos-methyl	mg/kg dry wt	< 0.009
Prochloraz	mg/kg dry wt	< 0.05
Procymidone	mg/kg dry wt	< 0.009
Prometryn	mg/kg dry wt	< 0.005
Propachlor	mg/kg dry wt	< 0.009
Propanil	mg/kg dry wt	< 0.03
Propazine	mg/kg dry wt	< 0.005
Propetamphos	mg/kg dry wt	< 0.009
Propham	mg/kg dry wt	< 0.009
Propiconazole	mg/kg dry wt	< 0.006
Prothiofos	mg/kg dry wt	< 0.009
Pyrazophos	mg/kg dry wt	< 0.009
Pyrifenox	mg/kg dry wt	< 0.012
Pyrimethanil	mg/kg dry wt	< 0.009
Pyriproxyfen	mg/kg dry wt	< 0.009
Quintozene	mg/kg dry wt	< 0.017
Quizalofop-ethyl	mg/kg dry wt	< 0.009
Simazine	mg/kg dry wt	< 0.009
Simetryn	mg/kg dry wt	< 0.009
Sulfentrazone	mg/kg dry wt	< 0.05
Sulfotep	mg/kg dry wt	< 0.009
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.017
Tebuconazole	mg/kg dry wt	< 0.009
Tebufenpyrad	mg/kg dry wt	< 0.005
Terbacil	mg/kg dry wt	< 0.009
Terbumeton	mg/kg dry wt	< 0.009
Terbuthylazine	mg/kg dry wt	< 0.005
Terbuthylazine-desethyl	mg/kg dry wt	< 0.009
Terbutryn	mg/kg dry wt	< 0.009
Tetrachlorvinphos	mg/kg dry wt	< 0.009
Thiabendazole	mg/kg dry wt	< 0.05
Thiobencarb	mg/kg dry wt	< 0.009

Sample Type: Soil		
Sample Name:		Composite of MN26126, MN26128, MN26130 & MN26132
Lab Number:		4123974.36
Multiresidue Pesticides in Soil samples by GCMS		
Tolylfluanid	mg/kg dry wt	< 0.005
Triadimefon	mg/kg dry wt	< 0.009
Triazophos	mg/kg dry wt	< 0.009
Trifluralin	mg/kg dry wt	< 0.009
Vinclozolin	mg/kg dry wt	< 0.009

Analyst's Comments

It has been noted that the method performance for Bitertanol and Paclobutrazol in the Multi-Residue Pesticide analysis is not acceptable therefore we are unable to report these compounds at this present time.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-30
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-30
Multiresidue Pesticides in Soil samples by GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.003 - 0.06 mg/kg dry wt	31-36
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	31-36
Composite Environmental Solid Samples*	Individual sample fractions mixed together to form a composite fraction.	-	9, 11-20, 22-30

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 09-Mar-2026 and 13-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Kim Harrison MSc
Client Services Manager - Environmental

Certificate of Analysis

Page 1 of 2

Client:	Groundwater & Environmental Services	Lab No:	4124975	A2Pv1
Contact:	Mr A MacDonald C/- Groundwater & Environmental Services PO Box 190 Cambridge 3450	Date Received:	09-Mar-2026	
		Date Reported:	12-Mar-2026	
		Quote No:	82855	
		Order No:		
		Client Reference:	Milldale Worth	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil				
Sample Name:	MN26100 06-Mar-2026	MN26103 06-Mar-2026	MN26106 06-Mar-2026	MN26109 06-Mar-2026
Lab Number:	4124975.1	4124975.2	4124975.3	4124975.4
Asbestos Presence / Absence	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001	% w/w < 0.001
As Received Weight	g 421.6	g 422.1	g 621.8	g 591.4
Dry Weight	g 317.1	g 282.7	g 460.8	g 391.2
Moisture*	% 25	% 33	% 26	% 34
Sample Fraction >10mm	g dry wt 84.4	g dry wt 162.7	g dry wt 152.6	g dry wt 216.9
Sample Fraction <10mm to >2mm	g dry wt 104.5	g dry wt 78.2	g dry wt 206.8	g dry wt 126.0
Sample Fraction <2mm	g dry wt 127.7	g dry wt 41.6	g dry wt 100.8	g dry wt 47.4
<2mm Subsample Weight	g dry wt 55.2	g dry wt 41.6	g dry wt 53.4	g dry wt 47.4
Weight of Asbestos in ACM (Non-Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001	g dry wt < 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
 - ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
 - Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
 - Trace - Trace levels of asbestos, as defined by AS4964-2004.
- For further details, please contact the Asbestos Team.

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.**
<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-4
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-4
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-4
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-4
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-4
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-4
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-4
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-4
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-4
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-4
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-4
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-4
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-4
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-4
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-4

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 12-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



John Keneth Paglingayan BAPSc
Laboratory Technician - Asbestos

Certificate of Analysis

Page 1 of 12

Client:	Groundwater & Environmental Services	Lab No:	4125232	SPv2
Contact:	Mr A MacDonald	Date Received:	09-Mar-2026	
	C/- Groundwater & Environmental Services	Date Reported:	17-Mar-2026	
	PO Box 190	Quote No:	82855	
	Cambridge 3450	Order No:		
		Client Reference:	Milldale North	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil						
Sample Name:		MN26133 08-Mar-2026	MN26134 08-Mar-2026	MN26135 08-Mar-2026	MN26136 08-Mar-2026	MN26137 08-Mar-2026
Lab Number:		4125232.1	4125232.2	4125232.3	4125232.4	4125232.5
Individual Tests						
Dry Matter	g/100g as rcvd	76	79	73	80	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	2	< 2	15	23	2
Total Recoverable Cadmium	mg/kg dry wt	0.21	< 0.10	0.65	1.42	0.46
Total Recoverable Chromium	mg/kg dry wt	8	8	36	44	9
Total Recoverable Copper	mg/kg dry wt	18	5	78	181	21
Total Recoverable Lead	mg/kg dry wt	9.3	6.4	95	167	39
Total Recoverable Nickel	mg/kg dry wt	4	< 2	35	31	8
Total Recoverable Zinc	mg/kg dry wt	155	13	4,900	840	570
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.4	< 0.4	< 0.4	< 0.3	-
1-Methylnaphthalene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
2-Methylnaphthalene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Acenaphthylene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Acenaphthene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Anthracene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Benzo[a]anthracene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.031	< 0.031	< 0.033	< 0.030	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.031	< 0.031	< 0.033	< 0.030	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	0.021	-
Benzo[e]pyrene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	0.016	-
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	0.021	-
Benzo[k]fluoranthene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Chrysene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Fluoranthene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Fluorene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	0.019	-
Naphthalene	mg/kg dry wt	< 0.07	< 0.07	< 0.07	< 0.07	-
Perylene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Phenanthrene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-
Pyrene	mg/kg dry wt	< 0.013	< 0.013	< 0.014	< 0.013	-

Sample Type: Soil						
Sample Name:		MN26138 08-Mar-2026	MN26139 08-Mar-2026	MN26140 08-Mar-2026	MN26141 08-Mar-2026	MN26142 08-Mar-2026
Lab Number:		4125232.6	4125232.7	4125232.8	4125232.9	4125232.10
Individual Tests						
Dry Matter	g/100g as rcvd	-	89	83	-	82
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	< 2	3	4	< 2	15
Total Recoverable Cadmium	mg/kg dry wt	0.13	0.17	0.35	0.13	0.51
Total Recoverable Chromium	mg/kg dry wt	6	11	22	5	16
Total Recoverable Copper	mg/kg dry wt	9	51	22	9	29
Total Recoverable Lead	mg/kg dry wt	10.1	6.7	199	54	830
Total Recoverable Nickel	mg/kg dry wt	< 2	21	35	9	18
Total Recoverable Zinc	mg/kg dry wt	107	99	152	83	520
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	-	< 0.007	-	-	-
Alachlor	mg/kg dry wt	-	< 0.006	-	-	-
Aldrin	mg/kg dry wt	-	< 0.011	-	-	-
Atrazine	mg/kg dry wt	-	< 0.007	-	-	-
Atrazine-desethyl	mg/kg dry wt	-	< 0.007	-	-	-
Atrazine-desisopropyl	mg/kg dry wt	-	< 0.014	-	-	-
Azaconazole	mg/kg dry wt	-	< 0.004	-	-	-
Azinphos-methyl	mg/kg dry wt	-	< 0.014	-	-	-
Benalaxyl	mg/kg dry wt	-	< 0.004	-	-	-
Bendiocarb	mg/kg dry wt	-	< 0.007	-	-	-
Benodanil	mg/kg dry wt	-	< 0.014	-	-	-
alpha-BHC	mg/kg dry wt	-	< 0.011	-	-	-
beta-BHC	mg/kg dry wt	-	< 0.011	-	-	-
delta-BHC	mg/kg dry wt	-	< 0.011	-	-	-
gamma-BHC (Lindane)	mg/kg dry wt	-	< 0.011	-	-	-
Bifenthrin	mg/kg dry wt	-	< 0.004	-	-	-
Bromacil	mg/kg dry wt	-	< 0.007	-	-	-
Bromophos-ethyl	mg/kg dry wt	-	< 0.007	-	-	-
Bromopropylate	mg/kg dry wt	-	< 0.007	-	-	-
Bupirimate	mg/kg dry wt	-	< 0.007	-	-	-
Buprofezin	mg/kg dry wt	-	< 0.007	-	-	-
Butachlor	mg/kg dry wt	-	< 0.007	-	-	-
Captafol	mg/kg dry wt	-	< 0.04	-	-	-
Captan	mg/kg dry wt	-	< 0.014	-	-	-
Carbaryl	mg/kg dry wt	-	< 0.007	-	-	-
Carbofenothion	mg/kg dry wt	-	< 0.007	-	-	-
Carbofuran	mg/kg dry wt	-	< 0.007	-	-	-
cis-Chlordane	mg/kg dry wt	-	< 0.011	-	-	-
trans-Chlordane	mg/kg dry wt	-	< 0.011	-	-	-
Chlorfenvinphos	mg/kg dry wt	-	< 0.010	-	-	-
Chlorfluazuron	mg/kg dry wt	-	< 0.007	-	-	-
Chlorothalonil	mg/kg dry wt	-	< 0.007	-	-	-
Chlorpropham	mg/kg dry wt	-	< 0.014	-	-	-
Chlorpyrifos	mg/kg dry wt	-	< 0.007	-	-	-
Chlorpyrifos-methyl	mg/kg dry wt	-	< 0.007	-	-	-
Chlortoluron	mg/kg dry wt	-	< 0.014	-	-	-
Chlozolinate	mg/kg dry wt	-	< 0.007	-	-	-
Coumaphos	mg/kg dry wt	-	< 0.014	-	-	-
Cyanazine	mg/kg dry wt	-	< 0.007	-	-	-
Cyfluthrin	mg/kg dry wt	-	< 0.009	-	-	-
Cyhalothrin	mg/kg dry wt	-	< 0.007	-	-	-
Cypermethrin	mg/kg dry wt	-	< 0.017	-	-	-
Cyproconazole	mg/kg dry wt	-	< 0.014	-	-	-
Cyprodinil	mg/kg dry wt	-	< 0.007	-	-	-
2,4'-DDD	mg/kg dry wt	-	< 0.011	-	-	-

Sample Type: Soil						
Sample Name:		MN26138 08-Mar-2026	MN26139 08-Mar-2026	MN26140 08-Mar-2026	MN26141 08-Mar-2026	MN26142 08-Mar-2026
Lab Number:		4125232.6	4125232.7	4125232.8	4125232.9	4125232.10
Multiresidue Pesticides in Soil samples by GCMS						
4,4'-DDD	mg/kg dry wt	-	< 0.011	-	-	-
2,4'-DDE	mg/kg dry wt	-	< 0.011	-	-	-
4,4'-DDE	mg/kg dry wt	-	< 0.011	-	-	-
2,4'-DDT	mg/kg dry wt	-	< 0.011	-	-	-
4,4'-DDT	mg/kg dry wt	-	< 0.011	-	-	-
Total DDT Isomers	mg/kg dry wt	-	< 0.07	-	-	-
Deltamethrin (including Tralomethrin)	mg/kg dry wt	-	< 0.007	-	-	-
Diazinon	mg/kg dry wt	-	< 0.004	-	-	-
Dichlobenil	mg/kg dry wt	-	< 0.007	-	-	-
Dichlofenthion	mg/kg dry wt	-	< 0.007	-	-	-
Dichlofluanid	mg/kg dry wt	-	< 0.007	-	-	-
Dichloran	mg/kg dry wt	-	< 0.03	-	-	-
Dichlorvos	mg/kg dry wt	-	< 0.010	-	-	-
Dicofol	mg/kg dry wt	-	< 0.04	-	-	-
Dicrotophos	mg/kg dry wt	-	< 0.04	-	-	-
Dieldrin	mg/kg dry wt	-	< 0.011	-	-	-
Difenoconazole	mg/kg dry wt	-	< 0.010	-	-	-
Dimethoate	mg/kg dry wt	-	< 0.014	-	-	-
Dinocap	mg/kg dry wt	-	< 0.08	-	-	-
Diphenylamine	mg/kg dry wt	-	< 0.014	-	-	-
Diuron	mg/kg dry wt	-	< 0.007	-	-	-
Endosulfan I	mg/kg dry wt	-	< 0.011	-	-	-
Endosulfan II	mg/kg dry wt	-	< 0.011	-	-	-
Endosulfan sulphate	mg/kg dry wt	-	< 0.011	-	-	-
Endrin	mg/kg dry wt	-	< 0.011	-	-	-
Endrin aldehyde	mg/kg dry wt	-	< 0.011	-	-	-
Endrin ketone	mg/kg dry wt	-	< 0.011	-	-	-
EPN	mg/kg dry wt	-	< 0.007	-	-	-
Ethion	mg/kg dry wt	-	< 0.007	-	-	-
Etrimfos	mg/kg dry wt	-	< 0.007	-	-	-
Famphur	mg/kg dry wt	-	< 0.007	-	-	-
Fenarimol	mg/kg dry wt	-	< 0.007	-	-	-
Fenitrothion	mg/kg dry wt	-	< 0.007	-	-	-
Fenpropathrin	mg/kg dry wt	-	< 0.007	-	-	-
Fenpropimorph	mg/kg dry wt	-	< 0.007	-	-	-
Fensulfothion	mg/kg dry wt	-	< 0.007	-	-	-
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	-	< 0.010	-	-	-
Fluazifop-butyl	mg/kg dry wt	-	< 0.007	-	-	-
Fluometuron	mg/kg dry wt	-	< 0.007	-	-	-
Flusilazole	mg/kg dry wt	-	< 0.007	-	-	-
Fluvalinate	mg/kg dry wt	-	< 0.006	-	-	-
Folpet	mg/kg dry wt	-	< 0.014	-	-	-
Furalaxyl	mg/kg dry wt	-	< 0.004	-	-	-
Haloxifop-methyl	mg/kg dry wt	-	< 0.007	-	-	-
Heptachlor	mg/kg dry wt	-	< 0.011	-	-	-
Heptachlor epoxide	mg/kg dry wt	-	< 0.011	-	-	-
Hexachlorobenzene	mg/kg dry wt	-	< 0.011	-	-	-
Hexaconazole	mg/kg dry wt	-	< 0.007	-	-	-
Hexazinone	mg/kg dry wt	-	< 0.004	-	-	-
Hexythiazox	mg/kg dry wt	-	< 0.04	-	-	-
Imazalil	mg/kg dry wt	-	< 0.04	-	-	-
Indoxacarb	mg/kg dry wt	-	< 0.007	-	-	-
Iodofenphos	mg/kg dry wt	-	< 0.007	-	-	-

Sample Type: Soil						
Sample Name:		MN26138 08-Mar-2026	MN26139 08-Mar-2026	MN26140 08-Mar-2026	MN26141 08-Mar-2026	MN26142 08-Mar-2026
Lab Number:		4125232.6	4125232.7	4125232.8	4125232.9	4125232.10
Multiresidue Pesticides in Soil samples by GCMS						
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	-	< 0.04	-	-	-
Isazophos	mg/kg dry wt	-	< 0.007	-	-	-
Isofenphos	mg/kg dry wt	-	< 0.004	-	-	-
Kresoxim-methyl	mg/kg dry wt	-	< 0.004	-	-	-
Leptophos	mg/kg dry wt	-	< 0.007	-	-	-
Linuron	mg/kg dry wt	-	< 0.04	-	-	-
Malathion	mg/kg dry wt	-	< 0.007	-	-	-
Metalaxyl	mg/kg dry wt	-	< 0.007	-	-	-
Methacrifos	mg/kg dry wt	-	< 0.007	-	-	-
Methamidophos	mg/kg dry wt	-	< 0.04	-	-	-
Methidathion	mg/kg dry wt	-	< 0.007	-	-	-
Methiocarb	mg/kg dry wt	-	< 0.007	-	-	-
Methoxychlor	mg/kg dry wt	-	< 0.011	-	-	-
Metolachlor	mg/kg dry wt	-	< 0.006	-	-	-
Metribuzin	mg/kg dry wt	-	< 0.007	-	-	-
Mevinphos	mg/kg dry wt	-	< 0.014	-	-	-
Molinate	mg/kg dry wt	-	< 0.014	-	-	-
Myclobutanil	mg/kg dry wt	-	< 0.007	-	-	-
Naled	mg/kg dry wt	-	< 0.04	-	-	-
Nitrofen	mg/kg dry wt	-	< 0.014	-	-	-
Nitrothal-isopropyl	mg/kg dry wt	-	< 0.007	-	-	-
Norflurazon	mg/kg dry wt	-	< 0.014	-	-	-
Omethoate	mg/kg dry wt	-	< 0.04	-	-	-
Oxadiazon	mg/kg dry wt	-	< 0.007	-	-	-
Oxychlorane	mg/kg dry wt	-	< 0.004	-	-	-
Oxyfluorfen	mg/kg dry wt	-	< 0.004	-	-	-
Parathion-ethyl	mg/kg dry wt	-	< 0.007	-	-	-
Parathion-methyl	mg/kg dry wt	-	< 0.007	-	-	-
Penconazole	mg/kg dry wt	-	< 0.007	-	-	-
Pendimethalin	mg/kg dry wt	-	< 0.007	-	-	-
Permethrin	mg/kg dry wt	-	< 0.003	-	-	-
Phosmet	mg/kg dry wt	-	< 0.007	-	-	-
Phosphamidon	mg/kg dry wt	-	< 0.007	-	-	-
Pirimicarb	mg/kg dry wt	-	< 0.007	-	-	-
Pirimiphos-methyl	mg/kg dry wt	-	< 0.007	-	-	-
Prochloraz	mg/kg dry wt	-	< 0.04	-	-	-
Procymidone	mg/kg dry wt	-	< 0.007	-	-	-
Prometryn	mg/kg dry wt	-	< 0.004	-	-	-
Propachlor	mg/kg dry wt	-	< 0.007	-	-	-
Propanil	mg/kg dry wt	-	< 0.03	-	-	-
Propazine	mg/kg dry wt	-	< 0.004	-	-	-
Propetamphos	mg/kg dry wt	-	< 0.007	-	-	-
Propham	mg/kg dry wt	-	< 0.007	-	-	-
Propiconazole	mg/kg dry wt	-	< 0.006	-	-	-
Prothiofos	mg/kg dry wt	-	< 0.007	-	-	-
Pyrazophos	mg/kg dry wt	-	< 0.007	-	-	-
Pyrifenoxy	mg/kg dry wt	-	< 0.010	-	-	-
Pyrimethanil	mg/kg dry wt	-	< 0.007	-	-	-
Pyriproxyfen	mg/kg dry wt	-	< 0.007	-	-	-
Quintozene	mg/kg dry wt	-	< 0.014	-	-	-
Quizalofop-ethyl	mg/kg dry wt	-	< 0.007	-	-	-
Simazine	mg/kg dry wt	-	< 0.007	-	-	-
Simetryn	mg/kg dry wt	-	< 0.007	-	-	-
Sulfentrazone	mg/kg dry wt	-	< 0.04	-	-	-

Sample Type: Soil						
Sample Name:		MN26138 08-Mar-2026	MN26139 08-Mar-2026	MN26140 08-Mar-2026	MN26141 08-Mar-2026	MN26142 08-Mar-2026
Lab Number:		4125232.6	4125232.7	4125232.8	4125232.9	4125232.10
Multiresidue Pesticides in Soil samples by GCMS						
Sulfotep	mg/kg dry wt	-	< 0.007	-	-	-
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	-	< 0.014	-	-	-
Tebuconazole	mg/kg dry wt	-	< 0.007	-	-	-
Tebufenpyrad	mg/kg dry wt	-	< 0.004	-	-	-
Terbacil	mg/kg dry wt	-	< 0.007	-	-	-
Terbumeton	mg/kg dry wt	-	< 0.007	-	-	-
Terbutylazine	mg/kg dry wt	-	< 0.004	-	-	-
Terbutylazine-desethyl	mg/kg dry wt	-	< 0.007	-	-	-
Terbutryn	mg/kg dry wt	-	< 0.007	-	-	-
Tetrachlorvinphos	mg/kg dry wt	-	< 0.007	-	-	-
Thiabendazole	mg/kg dry wt	-	< 0.04	-	-	-
Thiobencarb	mg/kg dry wt	-	< 0.007	-	-	-
Tolylfluanid	mg/kg dry wt	-	< 0.004	-	-	-
Triadimefon	mg/kg dry wt	-	< 0.007	-	-	-
Triazophos	mg/kg dry wt	-	< 0.007	-	-	-
Trifluralin	mg/kg dry wt	-	< 0.007	-	-	-
Vinclozolin	mg/kg dry wt	-	< 0.007	-	-	-
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	-	-	0.7	-	< 0.3
1-Methylnaphthalene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
2-Methylnaphthalene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
Acenaphthylene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
Acenaphthene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
Anthracene	mg/kg dry wt	-	-	0.027	-	< 0.013
Benzo[a]anthracene	mg/kg dry wt	-	-	0.031	-	0.015
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	0.042	-	0.018
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	0.062	-	< 0.030
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	0.061	-	< 0.029
Benzo[b]fluoranthene + Benzo[j]fluoranthene	mg/kg dry wt	-	-	0.089	-	0.025
Benzo[e]pyrene	mg/kg dry wt	-	-	0.049	-	0.015
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	0.030	-	0.018
Benzo[k]fluoranthene	mg/kg dry wt	-	-	0.037	-	< 0.013
Chrysene	mg/kg dry wt	-	-	0.050	-	0.013
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
Fluoranthene	mg/kg dry wt	-	-	0.090	-	0.025
Fluorene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	0.029	-	0.018
Naphthalene	mg/kg dry wt	-	-	< 0.06	-	< 0.07
Perylene	mg/kg dry wt	-	-	< 0.012	-	< 0.013
Phenanthrene	mg/kg dry wt	-	-	0.043	-	0.013
Pyrene	mg/kg dry wt	-	-	0.115	-	0.028
Sample Name:		MN26143 08-Mar-2026	MN26144 08-Mar-2026	MN26145 08-Mar-2026	MN26146 08-Mar-2026	MN26147 08-Mar-2026
Lab Number:		4125232.11	4125232.12	4125232.13	4125232.14	4125232.15
Individual Tests						
Dry Matter	g/100g as rcvd	82	-	-	-	-
Total Recoverable Lead	mg/kg dry wt	-	-	-	-	58
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	15	< 2	< 2	3	-
Total Recoverable Cadmium	mg/kg dry wt	0.52	0.14	0.30	< 0.10	-
Total Recoverable Chromium	mg/kg dry wt	15	2	5	5	-
Total Recoverable Copper	mg/kg dry wt	28	7	3	< 2	-

Sample Type: Soil						
Sample Name:		MN26143 08-Mar-2026	MN26144 08-Mar-2026	MN26145 08-Mar-2026	MN26146 08-Mar-2026	MN26147 08-Mar-2026
Lab Number:		4125232.11	4125232.12	4125232.13	4125232.14	4125232.15
Heavy Metals, Screen Level						
Total Recoverable Lead	mg/kg dry wt	800	91	3.7	6.7	-
Total Recoverable Nickel	mg/kg dry wt	19	2	< 2	< 2	-
Total Recoverable Zinc	mg/kg dry wt	520	127	7	< 4	-
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	0.4	-	-	-	-
1-Methylnaphthalene	mg/kg dry wt	< 0.012	-	-	-	-
2-Methylnaphthalene	mg/kg dry wt	< 0.012	-	-	-	-
Acenaphthylene	mg/kg dry wt	< 0.012	-	-	-	-
Acenaphthene	mg/kg dry wt	< 0.012	-	-	-	-
Anthracene	mg/kg dry wt	0.013	-	-	-	-
Benzo[a]anthracene	mg/kg dry wt	0.022	-	-	-	-
Benzo[a]pyrene (BAP)	mg/kg dry wt	0.028	-	-	-	-
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	0.038	-	-	-	-
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	0.037	-	-	-	-
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	0.036	-	-	-	-
Benzo[e]pyrene	mg/kg dry wt	0.021	-	-	-	-
Benzo[g,h,i]perylene	mg/kg dry wt	0.018	-	-	-	-
Benzo[k]fluoranthene	mg/kg dry wt	0.015	-	-	-	-
Chrysene	mg/kg dry wt	0.025	-	-	-	-
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.012	-	-	-	-
Fluoranthene	mg/kg dry wt	0.060	-	-	-	-
Fluorene	mg/kg dry wt	< 0.012	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	0.018	-	-	-	-
Naphthalene	mg/kg dry wt	< 0.06	-	-	-	-
Perylene	mg/kg dry wt	< 0.012	-	-	-	-
Phenanthrene	mg/kg dry wt	0.053	-	-	-	-
Pyrene	mg/kg dry wt	0.069	-	-	-	-

Sample Name:		MN26148 08-Mar-2026	MN26149 08-Mar-2026	MN26150 08-Mar-2026	MN26151 08-Mar-2026	MN26152 08-Mar-2026
Lab Number:		4125232.16	4125232.17	4125232.18	4125232.19	4125232.20
Individual Tests						
Total Recoverable Lead	mg/kg dry wt	10.9	19.8	7.5	-	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	-	-	-	37	13
Total Recoverable Cadmium	mg/kg dry wt	-	-	-	0.77	< 0.10
Total Recoverable Chromium	mg/kg dry wt	-	-	-	21	3
Total Recoverable Copper	mg/kg dry wt	-	-	-	40	2
Total Recoverable Lead	mg/kg dry wt	-	-	-	98	6.4
Total Recoverable Nickel	mg/kg dry wt	-	-	-	9	< 2
Total Recoverable Zinc	mg/kg dry wt	-	-	-	880	49

Sample Name:		MN26153 08-Mar-2026	MN26154 08-Mar-2026	MN26155 08-Mar-2026	MN26156 08-Mar-2026	MN26157 08-Mar-2026
Lab Number:		4125232.21	4125232.22	4125232.23	4125232.24	4125232.25
Individual Tests						
Dry Matter	g/100g as rcvd	97	86	-	92	91
Total Recoverable Zinc	mg/kg dry wt	-	-	192	-	-
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	4	6	-	1,090	1,120
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	0.22	-	1.41	1.44
Total Recoverable Chromium	mg/kg dry wt	40	9	-	360	370
Total Recoverable Copper	mg/kg dry wt	48	29	-	1,420	1,270
Total Recoverable Lead	mg/kg dry wt	13.2	7.1	-	4,100	7,500

Sample Type: Soil						
Sample Name:		MN26153 08-Mar-2026	MN26154 08-Mar-2026	MN26155 08-Mar-2026	MN26156 08-Mar-2026	MN26157 08-Mar-2026
Lab Number:		4125232.21	4125232.22	4125232.23	4125232.24	4125232.25
Heavy Metals, Screen Level						
Total Recoverable Nickel	mg/kg dry wt	163	8	-	36	37
Total Recoverable Zinc	mg/kg dry wt	70	78	-	1,570	1,400
Multiresidue Pesticides in Soil samples by GCMS						
Acetochlor	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Alachlor	mg/kg dry wt	< 0.006	< 0.006	-	-	-
Aldrin	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Atrazine	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Atrazine-desethyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Atrazine-desisopropyl	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Azaconazole	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Azinphos-methyl	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Benalaxyl	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Bendiocarb	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Benodanil	mg/kg dry wt	< 0.013	< 0.015	-	-	-
alpha-BHC	mg/kg dry wt	< 0.010	< 0.012	-	-	-
beta-BHC	mg/kg dry wt	< 0.010	< 0.012	-	-	-
delta-BHC	mg/kg dry wt	< 0.010	< 0.012	-	-	-
gamma-BHC (Lindane)	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Bifenthrin	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Bromacil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Bromophos-ethyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Bromopropylate	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Bupirimate	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Buprofezin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Butachlor	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Captafol	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Captan	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Carbaryl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Carbofenothion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Carbofuran	mg/kg dry wt	< 0.007	< 0.008	-	-	-
cis-Chlordane	mg/kg dry wt	< 0.010	< 0.012	-	-	-
trans-Chlordane	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Chlorfenvinphos	mg/kg dry wt	< 0.010	< 0.011	-	-	-
Chlorfluazuron	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Chlorothalonil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Chlorpropham	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Chlorpyrifos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Chlorpyrifos-methyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Chlortoluron	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Chlozolinate	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Coumaphos	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Cyanazine	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Cyfluthrin	mg/kg dry wt	< 0.008	< 0.010	-	-	-
Cyhalothrin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Cypermethrin	mg/kg dry wt	< 0.016	< 0.019	-	-	-
Cyproconazole	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Cyprodinil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
2,4'-DDD	mg/kg dry wt	< 0.010	< 0.012	-	-	-
4,4'-DDD	mg/kg dry wt	< 0.010	< 0.012	-	-	-
2,4'-DDE	mg/kg dry wt	< 0.010	< 0.012	-	-	-
4,4'-DDE	mg/kg dry wt	< 0.010	< 0.012	-	-	-
2,4'-DDT	mg/kg dry wt	< 0.010	< 0.012	-	-	-
4,4'-DDT	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Total DDT Isomers	mg/kg dry wt	< 0.06	< 0.07	-	-	-

Sample Type: Soil						
Sample Name:		MN26153 08-Mar-2026	MN26154 08-Mar-2026	MN26155 08-Mar-2026	MN26156 08-Mar-2026	MN26157 08-Mar-2026
Lab Number:		4125232.21	4125232.22	4125232.23	4125232.24	4125232.25
Multiresidue Pesticides in Soil samples by GCMS						
Deltamethrin (including Tralomethrin)	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Diazinon	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Dichlobenil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Dichlofenthion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Dichlofluanid	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Dichloran	mg/kg dry wt	< 0.03	< 0.03	-	-	-
Dichlorvos	mg/kg dry wt	< 0.010	< 0.010	-	-	-
Dicofol	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Dicrotophos	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Dieldrin	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Difenoconazole	mg/kg dry wt	< 0.010	< 0.011	-	-	-
Dimethoate	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Dinocap	mg/kg dry wt	< 0.08	< 0.09	-	-	-
Diphenylamine	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Diuron	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Endosulfan I	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Endosulfan II	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Endosulfan sulphate	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Endrin	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Endrin aldehyde	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Endrin ketone	mg/kg dry wt	< 0.010	< 0.012	-	-	-
EPN	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Ethion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Etrimfos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Famphur	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fenarimol	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fenitrothion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fenpropathrin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fenpropimorph	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fensulfothion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fenvalerate (including Esfenvalerate)	mg/kg dry wt	< 0.010	< 0.011	-	-	-
Fluazifop-butyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fluometuron	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Flusilazole	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Fluvalinate	mg/kg dry wt	< 0.006	< 0.006	-	-	-
Folpet	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Furalaxyl	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Haloxifop-methyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Heptachlor	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Heptachlor epoxide	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Hexachlorobenzene	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Hexaconazole	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Hexazinone	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Hexythiazox	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Imazalil	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Indoxacarb	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Iodofenphos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
IPBC (3-Iodo-2-propynyl-n-butylcarbamate)	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Isazophos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Isofenphos	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Kresoxim-methyl	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Leptophos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Linuron	mg/kg dry wt	< 0.04	< 0.04	-	-	-

Sample Type: Soil						
Sample Name:		MN26153 08-Mar-2026	MN26154 08-Mar-2026	MN26155 08-Mar-2026	MN26156 08-Mar-2026	MN26157 08-Mar-2026
Lab Number:		4125232.21	4125232.22	4125232.23	4125232.24	4125232.25
Multiresidue Pesticides in Soil samples by GCMS						
Malathion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Metalaxyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Methacrifos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Methamidophos	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Methidathion	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Methiocarb	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Methoxychlor	mg/kg dry wt	< 0.010	< 0.012	-	-	-
Metolachlor	mg/kg dry wt	< 0.006	< 0.006	-	-	-
Metribuzin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Mevinphos	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Molinate	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Myclobutanil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Naled	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Nitrofen	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Nitrothal-isopropyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Norflurazon	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Omethoate	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Oxadiazon	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Oxychlorane	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Oxyfluorfen	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Parathion-ethyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Parathion-methyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Penconazole	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Pendimethalin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Permethrin	mg/kg dry wt	< 0.003	< 0.003	-	-	-
Phosmet	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Phosphamidon	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Pirimicarb	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Pirimiphos-methyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Prochloraz	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Procymidone	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Prometryn	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Propachlor	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Propanil	mg/kg dry wt	< 0.03	< 0.03	-	-	-
Propazine	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Propetamphos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Propham	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Propiconazole	mg/kg dry wt	< 0.006	< 0.006	-	-	-
Prothiofos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Pyrazophos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Pyrifeno	mg/kg dry wt	< 0.010	< 0.011	-	-	-
Pyrimethanil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Pyriproxyfen	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Quintozone	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Quizalofop-ethyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Simazine	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Simetryn	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Sulfentrazone	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Sulfotep	mg/kg dry wt	< 0.007	< 0.008	-	-	-
TCMTB [2-(thiocyanomethylthio) benzothiazole, Busan]	mg/kg dry wt	< 0.013	< 0.015	-	-	-
Tebuconazole	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Tebufenpyrad	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Terbacil	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Terbuteton	mg/kg dry wt	< 0.007	< 0.008	-	-	-

Sample Type: Soil						
Sample Name:		MN26153 08-Mar-2026	MN26154 08-Mar-2026	MN26155 08-Mar-2026	MN26156 08-Mar-2026	MN26157 08-Mar-2026
Lab Number:		4125232.21	4125232.22	4125232.23	4125232.24	4125232.25
Multiresidue Pesticides in Soil samples by GCMS						
Terbutylazine	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Terbutylazine-desethyl	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Terbutryn	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Tetrachlorvinphos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Thiabendazole	mg/kg dry wt	< 0.04	< 0.04	-	-	-
Thiobencarb	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Tolyfluanid	mg/kg dry wt	< 0.004	< 0.004	-	-	-
Triadimefon	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Triazophos	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Trifluralin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Vinclozolin	mg/kg dry wt	< 0.007	< 0.008	-	-	-
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	-	-	-	< 0.3	< 0.3
1-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
2-Methylnaphthalene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Acenaphthylene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Acenaphthene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Anthracene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Benzo[a]anthracene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Benzo[a]pyrene (BAP)	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	-	-	-	< 0.026	< 0.026
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	-	-	-	< 0.026	< 0.026
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Benzo[e]pyrene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Benzo[g,h,i]perylene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Benzo[k]fluoranthene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Chrysene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Dibenzo[a,h]anthracene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Fluoranthene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Fluorene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Naphthalene	mg/kg dry wt	-	-	-	< 0.06	< 0.06
Perylene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Phenanthrene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Pyrene	mg/kg dry wt	-	-	-	< 0.011	< 0.011
Sample Name:		MN26158 08-Mar-2026				
Lab Number:		4125232.26				
Individual Tests						
Dry Matter	g/100g as rcvd	84				
Heavy Metals, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	16				
Total Recoverable Cadmium	mg/kg dry wt	0.11				
Total Recoverable Chromium	mg/kg dry wt	9				
Total Recoverable Copper	mg/kg dry wt	26				
Total Recoverable Lead	mg/kg dry wt	38				
Total Recoverable Nickel	mg/kg dry wt	< 2				
Total Recoverable Zinc	mg/kg dry wt	30				
Polycyclic Aromatic Hydrocarbons Screening in Soil*						
Total of Reported PAHs in Soil	mg/kg dry wt	< 0.3				
1-Methylnaphthalene	mg/kg dry wt	< 0.012				
2-Methylnaphthalene	mg/kg dry wt	< 0.012				
Acenaphthylene	mg/kg dry wt	< 0.012				

Sample Type: Soil		
Sample Name:		MN26158 08-Mar-2026
Lab Number:		4125232.26
Polycyclic Aromatic Hydrocarbons Screening in Soil*		
Acenaphthene	mg/kg dry wt	< 0.012
Anthracene	mg/kg dry wt	< 0.012
Benzo[a]anthracene	mg/kg dry wt	< 0.012
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.012
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 0.028
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 0.028
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.012
Benzo[e]pyrene	mg/kg dry wt	< 0.012
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.012
Benzo[k]fluoranthene	mg/kg dry wt	< 0.012
Chrysene	mg/kg dry wt	< 0.012
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.012
Fluoranthene	mg/kg dry wt	< 0.012
Fluorene	mg/kg dry wt	< 0.012
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.012
Naphthalene	mg/kg dry wt	< 0.06
Perylene	mg/kg dry wt	< 0.012
Phenanthrene	mg/kg dry wt	< 0.012
Pyrene	mg/kg dry wt	< 0.012

Analyst's Comments

It has been noted that the method performance for Bitertanol and Paclobutrazol in the Multi-Residue Pesticide analysis is not acceptable therefore we are unable to report these compounds at this present time.

Carbon particulates were observed in the matrix of samples 4125232.24 and .25 and this has absorbed some of the System Monitoring Compounds in the PAH analysis, whereby the recovery for Benzo[a]pyrene-d12 was 59% and 55% respectively. Therefore the results presented for these analytes may not represent the actual concentration in the sample.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	1-26
Environmental Solids Sample Preparation	Air dried at 35°C and sieved, <2mm fraction. Used for sample preparation May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	15-18, 23
Total of Reported PAHs in Soil	Sonication extraction, GC-MS/MS analysis. In-house based on US EPA 8270.	0.03 mg/kg dry wt	1-4, 8, 10-11, 24-26
Heavy Metals, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	1-14, 19-22, 24-26
Multiresidue Pesticides in Soil samples by GCMS	Sonication extraction, GC-ECD and GC-MS analysis. In-house based on US EPA 8081 and US EPA 8270.	0.003 - 0.06 mg/kg dry wt	7, 21-22
Polycyclic Aromatic Hydrocarbons Screening in Soil*	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.010 - 0.05 mg/kg dry wt	1-4, 8, 10-11, 24-26

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	1-4, 7-8, 10-11, 21-22, 24-26
Total Recoverable digestion	Nitric / hydrochloric acid digestion. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	-	15-18, 23
Total Recoverable Lead	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.4 mg/kg dry wt	15-18
Total Recoverable Zinc	Dried sample, sieved as specified (if required). Nitric/Hydrochloric acid digestion, ICP-MS, screen level. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	4 mg/kg dry wt	23
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	BaP Potency Equivalence calculated from; Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(j)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Benzo(a)pyrene x 1.0 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Fluoranthene x 0.01 + Indeno(1,2,3-c,d)pyrene x 0.1. Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.	0.024 mg/kg dry wt	1-4, 8, 10-11, 24-26
Benzo[a]pyrene Toxic Equivalence (TEF)*	Benzo[a]pyrene Toxic Equivalence (TEF) calculated from; Benzo[a]pyrene x 1.0 + Benzo(a)anthracene x 0.1 + Benzo(b)fluoranthene x 0.1 + Benzo(k)fluoranthene x 0.1 + Chrysene x 0.01 + Dibenzo(a,h)anthracene x 1.0 + Indeno(1,2,3-c,d)pyrene x 0.1. Guidelines for assessing and managing contaminated gasworks sites in New Zealand (GMG) (MfE, 1997).	0.024 mg/kg dry wt	1-4, 8, 10-11, 24-26

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 09-Mar-2026 and 17-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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Kim Harrison MSc
Client Services Manager - Environmental

Certificate of Analysis

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Client:	Groundwater & Environmental Services	Lab No:	4125524	A2Pv1
Contact:	Mr A MacDonald	Date Received:	09-Mar-2026	
	C/- Groundwater & Environmental Services	Date Reported:	12-Mar-2026	
	PO Box 190	Quote No:	82855	
	Cambridge 3450	Order No:		
		Client Reference:	Milldale North	
		Submitted By:	Mr A MacDonald	

Sample Type: Soil				
Sample Name:		MN26159 08-Mar-2026		MN26160 08-Mar-2026
Lab Number:		4125524.1		4125524.2
Asbestos Presence / Absence		Asbestos NOT detected.		Asbestos NOT detected.
Description of Asbestos Form		-		-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001		< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001		< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001		< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001		< 0.001
As Received Weight	g	464.6		719.0
Dry Weight	g	387.6		659.4
Moisture*	%	17		8
Sample Fraction >10mm	g dry wt	14.1		60.4
Sample Fraction <10mm to >2mm	g dry wt	42.8		201.2
Sample Fraction <2mm	g dry wt	329.6		396.0
<2mm Subsample Weight	g dry wt	52.9		50.7
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001		< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001		< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001		< 0.00001

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Please refer to the **BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.**
<https://www.branz.co.nz/asbestos>

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil			
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-2
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	1-2
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	1-2
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-2
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-2
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	1-2
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-2
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	1-2
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-2
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-2
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-2
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-2
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	1-2
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-2
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	1-2

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 12-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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John Keneth Paglingayan BAPSc
Laboratory Technician - Asbestos

Certificate of Analysis

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Client:	Groundwater & Environmental Services	Lab No:	4125525	A2Pv1
Contact:	Mr A MacDonald	Date Received:	09-Mar-2026	
	C/- Groundwater & Environmental Services	Date Reported:	13-Mar-2026	
	PO Box 190	Quote No:	82855	
	Cambridge 3450	Order No:		
		Client Reference:	Milldale North	
		Submitted By:	Mr A MacDonald	

Sample Type: Building Material

Sample Name	Lab Number	Sample Category*	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
MN26163 08-Mar-2026	4125525.1	Cement Product	22.22	Chrysotile (White Asbestos) detected. Organic fibres detected.	N/A
MN26164 08-Mar-2026	4125525.2	Cement Product	18.05	Amosite (Brown Asbestos) detected. Chrysotile (White Asbestos) detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

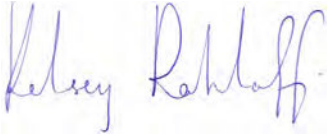
Sample Type: Building Material			
Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category*	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	-	1-2
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington.	0.01 g	1-2
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; 204 Thorndon Quay, Wellington. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-2
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1-2

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 10-Mar-2026 and 13-Mar-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

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A handwritten signature in blue ink, reading "Kelsey Rohloff". The signature is written in a cursive style with a horizontal line underneath the name.

Kelsey Rohloff BSc
Laboratory Technician - Asbestos

Appendix D

Statement of Qualification

Groundwater and Environmental Services

My full name is **Andrew James MacDonald**. I am an environmental consultant trading as **Groundwater and Environmental Services (GES)**.

I certify that I meet the requirements to operate as a suitably qualified and experienced practitioner (SQEP) under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES) in contaminated land and groundwater assessment, management, and remediation.

I hold Bachelor of Science and Master of Science Honours degrees from Auckland University.

I have worked as a consultant in the field of contaminated land and groundwater assessment, management, and remediation since 1991. In that time, I have dealt with contamination issues at numerous industrial, commercial, horticultural, rural and residential sites throughout New Zealand on behalf of commercial, local government and central government clients.

CAPABILITIES

Environmental Site Investigation
Remediation of Contaminated Land
Environmental Effects Assessment
Contaminated Site Consents
Groundwater Investigation
Contaminant Transport Modelling
Groundwater Contamination Remediation

EDUCATION

Bachelor of Science (Geology)	University of Auckland, 1989
Master of Science, Hons (Geology)	University of Auckland, 1991
Environmental Law (COP)	University of Auckland, 1993
Resource Management (Planning) Law (COP)	University of Auckland, 1993

PROFESSIONAL HISTORY

1995 - Groundwater and Environmental Services, Principal
1991 - 1995 Woodward-Clyde (NZ) Ltd, Environmental Scientist

REPRESENTATIVE EXPERIENCE

- Preliminary and detailed environmental site investigations of a wide range of potentially contaminated sites.
- Remedial action/site management plans for contaminated sites.
- Organisation and supervision of remediation at contaminated sites.
- Validation of remediation at contaminated sites.
- Long term contaminated site monitoring and management plans.

Groundwater and Environmental Services

- Resource consents for site remediation and ongoing discharges of contaminants to ground at contaminated sites.
- Provision of expert evidence related to contamination issues.
- Peer review of contaminated site investigations.
- Drilling supervision, soil sampling and groundwater monitoring well installation at a range of sites for investigations of contaminated ground and groundwater.
- Computer modelling of groundwater contaminant transport and associated environmental effects.